FINAL DRAFT
PRELIMINARY ASSESSMENT
CHEMICAL MANAGEMENT INC.
FARMINGDALE, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8901-09
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

MARCH 20, 1989

NUS CORPORATION SUPERFUND DIVISION

SUBMITTED BY:

JOANN L. WAGNER PROJECT MANAGER

MICHAEL BAUMAN SITE MANAGER **REVIEWED/APPROVED BY:**

RONALD M. NAMAN FIT OFFICE MANAGER

Temporary Drum Storage Area

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PAR	T I: SITE INFORI	MATION							
1.	Site Name/Alias	hemical Manage	ement, Inc.						
	Street 340 Easter	n Parkway							
	City Farmingdale	•		State New York	Zip <u>11735</u>				
2.	County Nassau				Cong. Dist. <u>Unknown</u>				
3	EPA ID No. NYDO	00691949							
4.	Latitude <u>40° 44′ 2</u>	0"N		Longitude <u>073</u>	° 26′ 23 ″ W				
	USGS Quad. Amit	ville, New York	. 7.5 minute s	e series, 1969, photorevised 1979.					
5.	Owner CM & RG F	Realty		Tel. No. <u>Unkno</u>	wn				
	Street 972 Nicolls	Road							
	City Deer Park	· · · · · · · · · · · · · · · · · · ·		State New York	Zip <u>11729</u>				
6.	Operator Chemic	al Management,	Inc.	Tel. No. <u>(516) 4</u> !	54-6766				
	Street 364 Eastern								
	City Farmingdale			State New York	Zip <u>11735</u>				
7.	Type of Ownershi	p							
	⊠ Private	☐ Federal	☐ State	e					
	□ County	Municipal	□Unk	nown	Other				
8.	Owner/Operator N	lotification on F	ile						
	☐ RCRA 3001	Date		CERCLA 103c	Date				
	■ None	🗵 Unkno	wn						
9.	Permit Informatio	n							
	Permit NYSDEC	Permit No. 30-Z-01	Date Issued 10/01/81	Expiration Date 09/30/84	Comments Operation has continued while new permit applica-				
	NCDH Toxic or				tion is being processed.				
	Hazardous materia storage permit	als <u> </u>	05/01/88	05/01/93					
10.	Site Status								
10.		□Inactive		☐ Unknown					
11.	Years of Operation	_		to Present					
12.	Identify the type: above- or below- waste unit numbe	s of waste unit ground tanks or	containers, la		dment, piles, stained soil, .) on site. Initiate as many				
	Waste Unit No.	Waste Aboveground !	Unit Type Storage Tanks		ncility Name for Unit				

2

Drum Area

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

In October of 1982 a representative from the Nassau County Fire Marshal's Office (NCFMO) noted that the building containing drums was in poor repair. The Nassau County Department of Health (NCDH) was notified by the NCFMO of the building's poor repair and subsequently contacted Chemical Management. Chemical Management agreed to have the necessary repairs completed. No further references were made in available background information to suggest that this has continued to be a problem at Chemical Management. No spills or other releases beyond the secondary containment enclosures have been reported.

13. Information available from

Contact Amy Brochu	Agency U.S. EPA	Tel. No. <u>(201) 906-6802</u>
Preparer Michael Bauman	Agency NUS Corp. Region 2 FIT	Date March 20, 1989

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.								
Waste Unit1_	-	Aboveground Storage Tanks	Storage Tanks					

1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.

The RCRA status of this facility is unknown. The storage tanks have been permitted under New York State Department of Environmental Conservation (NYSDEC) permit number 30-Z-01 as part of the necessary equipment for treatment of hazardous wastes. These tanks are also permitted for temporary storage of toxic or hazardous materials storage by the Nassau County Department of Health (NCDH). These tanks have been used to hold toxic substances since 1979.

2. Describe the location of the waste unit and identify clearly on the site map.

All storage tanks are above ground and are on the first floor of the Chemical Management building.

3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.

Chemical Management treats hazardous wastes, and during this treatment, numerous tanks are used. The number of tanks and their usage and capacity are as follows:

- 4 Waste treatment tanks, 7,500 gallons each
- 2 Waste treatment tanks, 8,000 gallons each
- 1 Waste treatment tank, 10,000 gallons
- 1 Chemical (unspecified) storage tank, 400 gallons
- 1 Chemical (unspecified) storage tank, 13,750 gallons
- 1 Chemical (unspecified) storage tank, 22,000 gallons
- 1 Chemical (unspecified) storage tank, 70,000 gallons
- 2 Cyanide solution storage tanks, 7,500 gallons each
- 1 Waste oil storage tank, 5,000 gallons
- 2 Water rinse storage tanks, 250 gallons each
- 1 Trade name, organic storage tank, 150 gallons
- 1 Laboratory chemicals/reagents tank, 1,200 gallons

These tanks are not all full at the same time.

4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.

The physical state of substances held in the storage tanks is liquid.

5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.

Waste oils, silver solutions, copper solutions, and cyanide solutions are treated at Chemical Management. During the processing and treatment of the metal solutions, caustic and acidic solutions are used.

6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.

All of the storage tanks are located on the first floor of the building. Berms of sufficient height to contain any spills or tank failures surround each area in the building where storage tanks are located. The cement floors and berms surrounding the tanks have been coated to make them impermeable to the substances present on site. To prevent any spills from leaving the building, there are also berms in front of each doorway where all wastes are transferred from and to vehicles.

Ref. Nos. 2, 3, 4, 5, 19

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, com	plete the following six items.
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Waste Unit 2 - <u>Drum Area</u> <u>Temporary Drum Storage Area</u>

1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.

The RCRA status of the drum storage area is unknown. However, the drum storage area has been permitted under NYSDEC permit number 30-Z-01 as part of the necessary temporary storage associated with treatment of hazardous substances. The drum area has been used to store hazardous substances since 1980.

2. Describe the location of the waste unit and identify clearly on the site map.

The drum storage area is contained within the southeast portion of the Chemical Management building.

3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.

The drum storage area is permitted to contain up to 150 drums at any one time.

4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.

The drums contain untreated solutions, waste oils, or sludge derived from the treatment process.

5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.

Waste oil, silver solutions, copper solutions, and cyanide solutions are treated at Chemical Management. During the treatment of the metal solutions, metals are precipitated out of solution and separated from the water to form a sludge. The sludge is drummed and hauled to a disposal facility.

6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.

The wastes are drummed and held temporarily until they are hauled to a disposal facility. There is a maximum permitted number of drums allowed in the storage area. The berms around the area are large enough to contain the contents of two drums. The cement berms and floor of the storage area have been coated to make them impermeable to the substances on site. To prevent any spills from leaving the building, berms have also been placed at each door where all wastes are transferred from and to vehicles.

Ref. Nos. 1, 2, 3, 4, 5, 6, 19

PART III: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.

A release to groundwater is unlikely because the wastes are stored in properly maintained tanks or drums with a secondary impermeable containment system to contain spills. In addition, berms are placed at each door to prevent any spills from leaving the building.

Ref. Nos. 2, 5, 19

2. Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.

Three aquifers are present below the site. The water table aquifer is present in the glacial deposits that cap other sediments on Long Island. The Magothy aquifer exists in the undifferentiated Matawan Group and Magothy Formation sediments. The Lloyd aquifer is the deepest aquifer below the site and is present in the Lloyd sands.

The aquifer of concern in the area of Chemical Management is the Magothy aquifer due to the fact that public supply wells within 3 miles of Chemical Management draw from this aquifer. The Magothy aquifer is recharged from the water table aquifer and in turn recharges the Lloyd aquifer. Therefore, although all three aquifers have different potentiometric surfaces which evidence confining layers separating the aquifer, the aquifers are to some extent hydrologically connected. The sediments comprising the Magothy aquifer are fine to medium quartzose sand, silt, clay, and gravel beds. Permeability values associated with sediments such as these may exceed 10⁻³ cm/sec. Depth to groundwater in the area of Chemical Management ranges from 15 ft to 30 ft below ground surface. Although no site-specific information is available to establish groundwater flow direction, regional groundwater flow trends southward.

Ref. Nos. 7, 8, 9, 11

3. Is a designated sole source aquifer within 3 miles of the site?

The whole of Long Island is designated as a sole source aquifer area.

Ref. No. 10

4. What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?

The depth from the ground surface to the water table in this area varies from 15 to 30 feet.

Ref. Nos. 8, 9

5. What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?

Permeabilities associated with glacial deposits that vary from clay to sand particle sizes can exceed 10⁻³ cm/sec.

Ref. Nos. 7, 11

6. What is the net annual precipitation for the area?

The net annual precipitation is approximately 15 inches.

Ref. No. 11

7. Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).

Groundwater is used as a municipal drinking water source

Ref. No. 12

16. Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).

Surface water is used to recharge groundwater.

Ref. No. 8

17. Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.

There are no wetlands in the drainage pattern from Chemical Management.

Ref. No. 16

18. Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.

There are no critical habitats of federally listed endangered species along the migration path from Chemical Management.

Ref. No. 20

19. What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?

No sensitive environments exist within 2 miles.

Ref. Nos. 16, 20

20. Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).

There are no surface water intakes along the surface water drainage course. Surface runoff is directed into a recharge basin.

Ref. Nos. 8, 16

21. What is the state water quality classification of the water body of concern?

As water quality classifications are for natural surface waters and the surface water runoff from the site is collected by storm sewers and directed to a recharge basin, there is no applicable water quality classification.

22. Describe any apparent biota contamination that is attributable to the site.

No biota contamination attributable to Chemical Management was mentioned in the available background information.

AIR ROUTE

23. Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.

A release to air is unlikely because the wastes handled on site are metals in solution, and used engine oil, both of which do not readily volatilize.

Ref. Nos. 2, 3, 4

24. What is the population within a 4-mile radius of the site?

The population within 4 miles of the site is approximately 237,500.

Ref. No. 17

8. What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?

Distance 200 ft Depth 450 ft

Ref. Nos. 13, 14, 15

9. Identify the population served by the aquifer of concern within a 3-mile radius of the site.

Public water supply provides water to approximately 189,000 people.

Ref. No. 12

SURFACE WATER ROUTE

10. Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.

A release to surface water is unlikely because the wastes are stored in properly maintained tanks or drums inside the Chemical Management processing building, with secondary impermeable containment systems to contain spills.

Ref. No. 5

11. Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.

Chemical Management is located in a heavily developed portion of Long Island where surface runoff is collected in storm drains and directed to recharge basins. Recharge basins are ponding areas where water infiltrates to groundwater. The closest recharge basin to Chemical Management is 400 ft north.

Ref. Nos. 8, 16

12. What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)

The facility slope is estimated to be less than 1 percent.

Ref. No. 13

13. What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)

Because the surface water runoff is collected into storm drains and does not enter a body of surface water such as a river or a lake, the slope of the intervening terrain as defined cannot be calculated.

Ref. Nos. 8, 16

14. What is the 1-year 24-hour rainfall?

The 1-year 24-hour rainfall is 2.6 inches.

Ref. No. 11

15. What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.

The closest recharge basin is 400 ft north of the site; however, site runoff would be directed into city storm drains prior to entering the recharge basin.

Ref. Nos. 8, 16

FIRE AND EXPLOSION

25. Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.

A fire occurred at Chemical Management on May 18, 1987 in a compressor motor. No other fires or potential explosive conditions have been reported.

Ref. No. 18

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

The population within 2 miles of the site is approximately 58,700.

Ref. No. 17

DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

Waste storage and treatment are all contained within the Chemical Management building, and the area is fenced; therefore, direct contact with hazardous substances is only likely for employees.

Ref. Nos. 13, 15, 19

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

There are no known areas of contamination attributable to Chemical Management, Inc.

Ref. No. 13

29. What is the population within a 1-mile radius of the site?

The population within 1 mile of the site is approximately 18,500.

Ref. No. 17

PART IV: SITE SUMMARY AND RECOMMENDATIONS

Chemical Management, Inc. is a waste reclamation business located at 340 Eastern Parkway, Farmingdale, Nassau County, New York. Chemical Management, Inc. rents a building from Plascal Corp. located in an industrial area of Farmingdale. Immediately surrounding this industrial area are houses, and less than 0.5 mile away is Bethpage State Park. With the exception of Bethpage State Park, the general area surrounding Chemical Management is densely populated; a total of approximately 237, 500 people live within 4 miles of the site.

Chemical Management treats waste generated by other firms. Waste oils and heavy metal solutions such as copper, silver, and cyanide are collected by Chemical Management and brought to the building at 340 Eastern Parkway. The trucks delivering these wastes are driven into the building, and the wastes are unloaded into holding tanks. The contents of these holding tanks are then transferred into other treatment tanks or treatment equipment. The products of treatment are sludge, water, and reclaimed product. The sludge is drummed and hauled to a disposal facility, the water is discharged into the town sewage system under permit, and the reclaimed product is sold. The tanks and the drum storage area are enclosed in the building, and all areas where wastes are handled or stored are bermed to contain any spills.

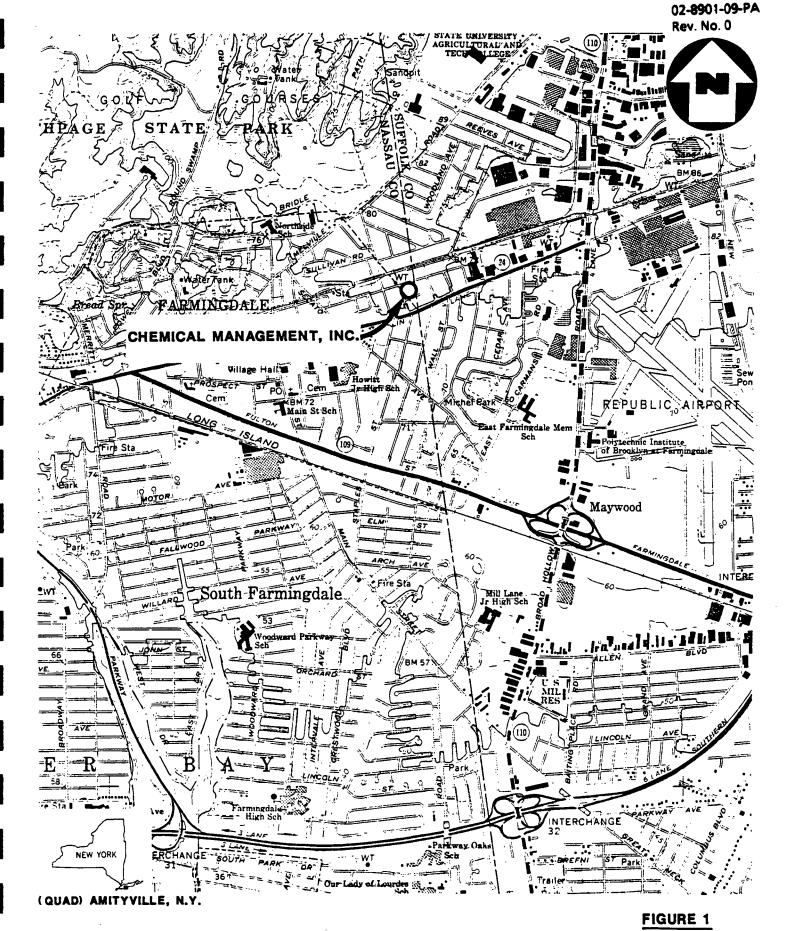
In 1979 Chemical Management started efforts to begin operations at 340 Eastern Parkway. These efforts included applying to the New York State Department of Environmental Conservation (NYSDEC), the Nassau County Department of Health (NCDH), and the Farmingdale Department of Public Works for the necessary permits to operate the facility. In 1984 the NYSDEC permit was due for renewal; since that time Chemical Management has operated under a temporary status while its permit renewal is in progress. During the period of operation, NYSDEC and NCDH have inspected Chemical Management several times. These inspections have not revealed any spills that were not contained by the secondary containment berms. In October of 1982 a representative from the Nassau County Fire Marshal's Office (NCFMO) noted that the building containing drums was in poor repair. The NCDH was notified by the NCFMO of the building's poor repair and subsequently contacted Chemical Management. Chemical Management agreed to have the necessary repairs completed. No further references were made in available background information to suggest that this has continued to be a problem at Chemical Management.

Although Chemical Management is located in a densely populated area of Long Island, the potential for public exposure to wastes handled at this facility is low. The area around Chemical Management is fenced, and the waste storage tanks and drum storage areas are all contained within the building, thus preventing the local population from coming into direct contact with the wastes. Sealed

cement floors and berms around storage areas and at doors prevent any accidental spills from leaving the building before they are cleaned up, thus preventing the local population from indirect exposures to wastes through either groundwater or surface water. It should be noted that surface water runoff in this area of Long Island is collected by storm drain systems and directed into recharge basins. Recharge basins are open ponding areas where water stands until it filters down into the ground. A recharge basin is located within 400 ft of Chemical Management.

Due to the lack of evidence of any releases to the environment and the preventive measures taken to prevent public exposure to wastes, the recommendation of **NO FURTHER REMEDIAL ACTION PLANNED (NFRAP)** is assigned to this site.

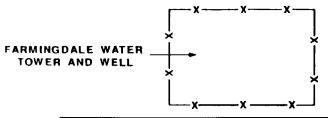
ATTACHMENT 1



SITE LOCATION MAP

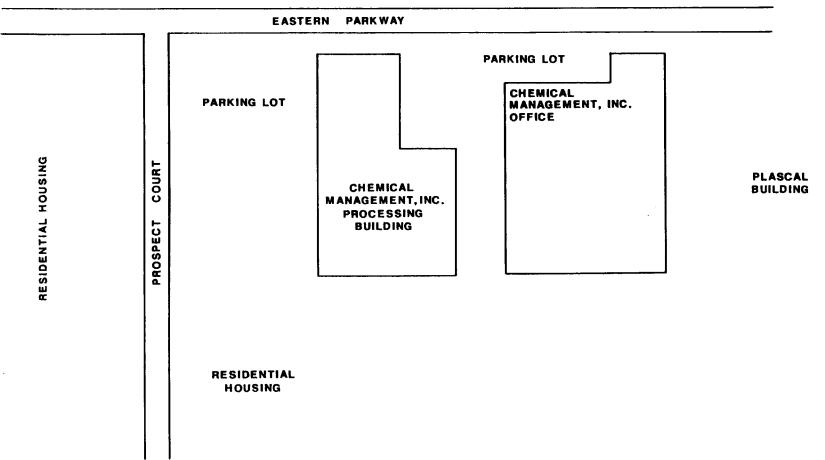
CHEMICAL MANAGEMENT, INC., FARMINGDALE, N.Y.





PLASCAL BUILDINGS





SITE MAP CHEMICAL MANAGEMENT, INC., FARMINGDALE, N.Y.

NOT TO SCALE



EXHIBIT A

PHOTOGRAPH LOG

CHEMICAL MANAGEMENT, INC. FARMINGDALE, NEW YORK JANUARY 11, 1989

CHEMICAL MANAGEMENT, INC. FARMINGDALE, NEW YORK JANUARY 11, 1989

PHOTOGRAPH INDEX ALL PHOTOGRAPHS TAKEN BY GERALD HANNAY

Photo Number	<u>Description</u>	<u>Time</u>
F1	Public water supply property opposite the site.	0900
F2	View of western side of site from Eastern Blvd.	0905
F3	On Eastern Blvd. facing southwest at Chemical Management building.	0910
F4	On Eastern Blvd. facing south at driveway on the east side of the Chemical Management, Inc.	0915

CHEMICAL MANAGEMENT, INC. FARMINGDALE, NEW YORK



January 11, 1989 0900 Public water supply property opposite the site.



January 11, 1989 0905 View of western side of site from Eastern Blvd.

F1



CHEMICAL MANAGEMENT, INC. FARMINGDALE, NEW YORK



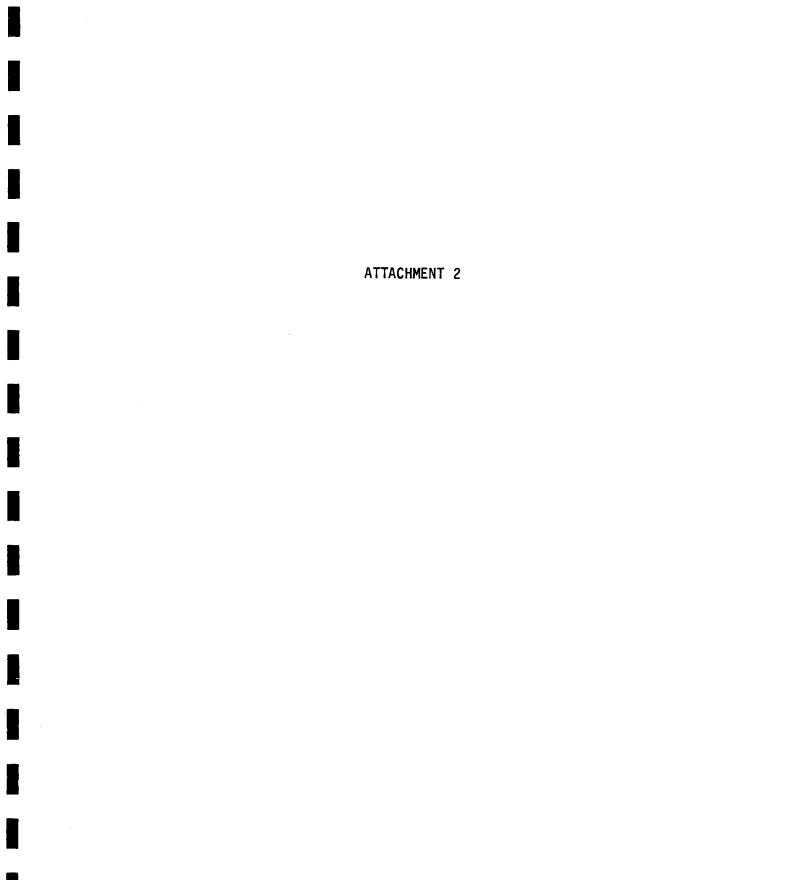
January 11, 1989 0910 On Eastern Blvd. facing southwest at Chemical Management building.



January 11, 1989 0915 On Eastern Blvd. facing south at driveway on the east side of the Chemical Management, Inc. property.

F4

F3



REFERENCES

- 1. Nassau County Health Department Continuation Sheet, comments by Howard Schaefer (NCDH), October 14, 1982.
- 2. Letter from Dale Grimaldi, Chemical Management, Inc., to John Dowling, Nassau County Department of Health, March 26, 1987.
- 3. Toxic or Hazardous Materials Storage Facility Permit, Facility number 000011, Nassau County Department of Health, May 1, 1988.
- 4. Chemical Management, Inc. Information Sheet.
- 5. Letter from A.R. DeCostanzo, New York State Department of Environmental Conservation, to Jack Leibel, Chemical Management, Inc., January 8, 1980.
- 6. Permit under the Environmental Conservation Law, Article 27, Title 7, Part 360 Facility No. 2525, expiration date 09/30/84.
- 7. Garber, Murray, Geology of the Lloyd Aquifer, Long Island, New York, Water-Resources Investigations Report 85-4159, U.S. Geological Survey, 1986.
- 8. Seaburn, G.E. and D.A. Aronson, Catalog of Recharge Basins on Long Island, New York, in 1969, NYSDEC and U.S. Geological Survey, Bulletin 70, 1973.
- 9. Field Notebook No. 0071 Circuitron Corp., TDD No. 02-8704-04, Site Inspection, NUS Corp., Region 2 FIT, Edison, NJ, May 14, 1987.
- 10. Federal Register, Vol. 43, No. 120 Wednesday, June 21, 1978 pp. 26611 and 26612.
- 11. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.
- 12. New York State Atlas of Community Water System Sources 1982, New York State Department of Health, Division of Environmental Protection, Bureau of Public Water Supply Protection.
- 13. Preliminary Assessment Off-Site Reconnaissance Information Reporting Form, Chemical Management, TDD No. 02-8901-09, NUS Corp. Region 2 FIT, Edison, NJ, January 11, 1989.
- 14. Map from RCRA files 26 Federal Plaza. N.Y., N.Y.
- 15. Letter from Donald H. Myott, P.E., Nassau County Department of Health, to Diane Trube, NUS Corp., March 23, 1987.
- 16. Three-Mile Vicinity Map based upon U.S. Department of the Interior, Geological Survey Topographic Maps, 7.5 minute series, Amityville, NY, 1969, photorevised 1979 and Huntington NY, 1967, photorevised 1979.
- 17. General Sciences Corporation, Graphical Exposure Modeling System (GEMS). Landover Maryland, 1986.

REFERENCES (Cont'd)

- 18. Report of Special Situation, Nassau County Department of Health, Joseph Schechter, May 19, 1987.
- 19. New York State Department of Environmental Conservation Inspection Form Type B.
- 20. Letter from Michael S. Scheibel, NYSDEC, to Diane Trube, NUS Corp., December 20, 1989.

REFERENCE NO. 1

Address: EASTERN PARKURY Continuation Sheet Nassau County Health Department FARMINGDALE COMMENTS DATE 10/14/8 request of Greg Tire Mershal's The We corrected shortly by his on un connection ded to fell DH-1198, 9/71

Agent

: PLASCAL

HW W

ENVIRONMENTAL

HEALTH

ENVIRONMENTAL	Owner or	Inspecto
HEALTH Continuation Sheet	Agent : Address:	
Jassau County Health Departmen	•	•
DATE	COMMENTS	
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1 11	on to please the	work plorage
area are adequate		
0		
	Howard	Schaufer
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REFERENCE NO. 2

70: 1 yur 324 1112 3/27/8.

"Working together to preserve the environment"

March 26, 1987

Mr. John Dowling
Nassau County Department of Health
Bureau of Land Resources Management
240 Old County Road
Mineola, New York 11501

Dear Mr. Dowling:

Please find enclosed forms # 1, 2, and 3 of application to determine if our facility is subject to the Ordinance titled <u>Toxic and Hazardous Materials Storage</u>, <u>Handling and Control</u>. In addition, please find a Plot Plan as required by Instructions for Completing Form 2- Tank Registration. If you should have any questions, please do not hesitate to call our office.

Yours truly, Chemical Management Inc.

Dale Grimaldi

RECEIVED

MAR 2 7 1987

NCDH-BLRM

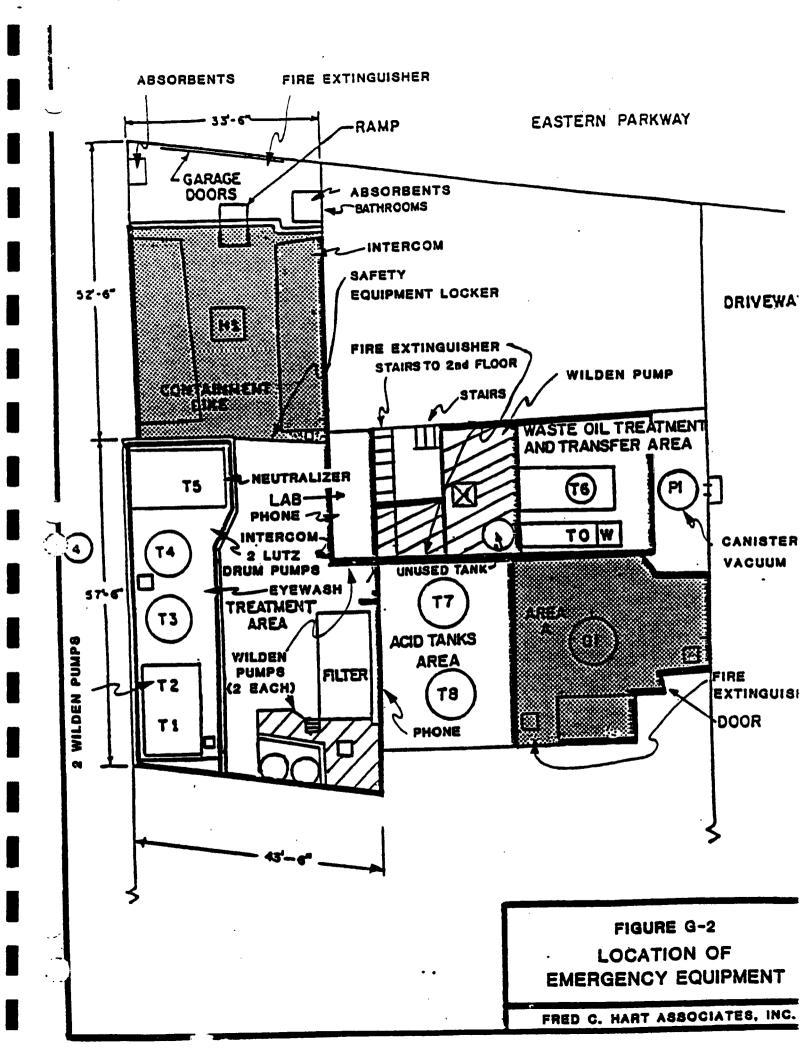
NASSAU COUNTY DEPARTMENT OF HEALTH APPLICATION FOR A TOXIC OR HAZARDOUS FORM 1 - GENERAL INFORMATION SEE INSTRUCTION SHEET	NASSAU COUNT MATERIALS STORAGE	TY PUBLIC HEALTH (FACILITY PERMIT	PROPERANCE E- PROVI MAR 2 7 1987		Facility I.D. 3 0-2-01 [] Munici	
Check all that apply to your facility:	age 🏿 Container	Storage Bu	Nk CsOlabelge BL[R Shorage o	,	
Reason for submitting application:	☐ New	Renewal	Chi	ange	☐ Const	ruction
Facility Name	Street Address		Village	State	Zip	Phone
Chemical Management Inc.	340 Eastern Parkwa	ay	Farmingdale	N.Y.	11735	454-6766
Facility Mailing Address (If differen	nt from above)		Facility Contac	t Person (1	Name & Title)	Phone
Facility Owner	Street Address		Village	State	Zip	Phone
Chemical Management Inc.	340 Eastern Parkw	/ay	Farmingdale	N.Y.	11735	454-6766
Property Owner (If not Facility Owner	Street Address	······································	Village	State	Zip	Phone
CM & RG Realty	972 Nicolls Road		Deer Park	N.Y.	11729	454~6766
Tank Owner (If not Facility Owner)	Tank Owner (If not Facility Owner) Street Address				Zip	Phone
Name that should appear on Permit (Permit (If different from Facility Owner)	ermittee) Chemical Manageme	ent Inc.				1
Permittee's Street Address		Village		State	Zip	Phone
340 Eastern Parkway		Farmingdale		N.Y.	11735	454-6766
Permittee's Relationship to Facility Owner:	Operator of Fac	cility 0	ther (Specify):		•	
Principal Property Tax Code: Sch	ool District No.	Section	Block		Lot	
Forms Attached	ank Registration	Form 3 - Bulk Stor	& Container age Registration		m 4 - Storage De-icii	e of Road ng Materials
I hereby affirm under penalty of perj statements and exhibits is true to th	ury that the info ne best of my knowl	rmation provided edge and belief.	on this form and	d on any at	tached forms	,
Print Name	Signature	1.1.	Title		Da	ite
Jack M. Leibel	JUM/16	llif	Pres	ident	ر ا	1/1/E)
EH 857 4/86				'' 		/ · · · · · · · · · · · · · · · · · · ·

	APPLICAT FORM 2 - SEE INST	rio · T Ru	CTION SHEETS	C TIO	OR ON	HEA HAZ	LTH	ous	MATERIALS STORA	AGE FAC	PRIE PERET V	E	Date Ap Receive	pli				Lls	ie Onl	Facilii	ty I D
	Chemical Management Inc. MAR 2 7 1987										Reviewe By		~ <u>`</u>					Date Re			
340 Eastern Parkway Farmingdale, NY 11735											No.of N										
Facility Address NCDH BLRM Action: No. o										NO.01 F	MONTHS										
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NASSAU COUNT APPLICATION FORM 3 - BUL SEE INSTRUCT Facility Name	FOR A TOXION TO SHEETS	RECFE Date Applicat Received Reviewed	ion	Fac 11	ity I.I / Peviewo					
	Chemical	Management	Inc.				Action:	Not i		Mont hs
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Secondary Containment:	X	Impervious Berm/Dike	Impervious Floor/Pad	Roof	□Walls		Drain & □ No e Tank □ No	111111	Other Specify);	
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	NCDU AL.		•			Phys-	Amount Ste	red	Storage Method	
тре	NCDH Numbe	er	Ma		Average Quantity	Units	Average Number	Гут		
			Lime			2	6,000	3	300 bags	5
			Filter Aid			2	25,000	3	500 bags	5
			Absorbment- s	peedri		2	2,000	3	50 bags	,
	·····		" C	hembind		2	10,000	3	250 bags	5
			Aluminum sulfa	ate		2	1,000	3	10 bags	5
			caustic soda			1	660	1	12 drums	1
			calcium chloric	le		2	2,500	3	25 bags	5
			sodium bisulfit	e		2	1,000	3	10 bags	5
			ferrous sulphat	e		2	500	3	10 bags	,
			sulfuric acid			l	270	1	18	2
			sodium hypochl	orite		1	660	1	12 drums	1
			sodium hydrosu	lfite		2 (3	4	2
			3/	18/8/	D	of 2.		***************************************		¶.

							REC	Office	Use Only		
APPLICA FORM 3	COUNTY DEPARTMENT OF TION FOR A TOXIC OR - BULK AND CONTAINER TRUCTION SHEETS	HAZARDOU		RAGE FACILIT	TY PERMIT		Date Applicat Received AR 2 Reviewed	ion		Facilit	1
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Facility				e, NY 1173	15		Action: — Approved	Disar	Y H	No.of M	onths
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DH-2791 11/86



REFERENCE NO. 3



TIASSAU COUNTY DEPARTMENT of HEALTH

Page_1_

TOXIC OR HAZARDOUS MATERIALS STORAGE FACILITY PERMIT

Facility Number	000011	Type of Permit	Operation Construction	Date Issued:	05/01/88	Date Modified: 04	Expiration Date: 05/01/93
Name of Permittee:	CHEMICAL	MANAGEME	NT INC.	Address Permitte	of 34	O EASTERN RMINGDALE	

GENERAL CONDITIONS

- By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Article XI, Nassau County Public Health Ordinance.
- All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Nassau County Department of Health prior to their implementation. The permittee shall notify the Health Department 48 hours in advance of the start of construction.
- 3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to defend, indemnify and save harmless the County from suits, actions, damages and costs of every name and description resulting from the said project.

Name of Facility:	r	٦
	CHEMICAL MANAGEMENT INC.	
Mailing Address:		
, •	340 EASTERN PARKHAY	
	L FARMINGDALE NY 11735-	J

THIS FACILITY CONSISTS OF STORAGE AREAS AS LISTED ON PLANS AND APPLICATIONS FILED WITH THIS DEPARTMENT

Tank/Storage Area Number	Capacity	Type of Toxic or Hazardous Material Stored	
0001	7500	TANK. WASTE TREATMENT	
0001	22000	MULTIPLE CHEMICALS STORED	
0001	13750	MULTIPLE CHEMICALS STORED	
0002	70000	MULTIPLE CHEMICALS STORED	
0002	400	MULTIPLE CHEMICALS STORED	
0002	7500	TANK, WASTE TREATMENT	
0003	7500	TANK. WASTE TREATMENT	
0004	7500	TANK. WASTE TREATMENT	
0005	10000	TANK. WASTE TREATMENT	
0006	8000	TANK. WASTE TREATMENT	
0007	8000	TANK. WASTE TREATMENT	
0008	7500	CYANIDES	CONTINUED
			

Authorizing Officer

John J. Dowling, M.D., M.P.H. Commissioner of Health

EH 768 9/86

THIS PERMIT MUST BE POSTED IN A CONSPICUOUS PLACE AT THE FACILITY



NASSAU COUNTY DEPARTMENT of HEALTH

Page ?

TOXIC OR HAZARDOUS MATERIALS STORAGE FACILITY PERMIT

Facility Number	000011	Type of [] Permit	Operation Construction	Date Issued: 05/01/88	Date Modified: 04/04/88	Expiration Date: 05/01/93
Name of Permittee:	CHEMICAL	MANAGEMENT	INC.		O EASTERN PARKWAY	

GENERAL CONDITIONS

- By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Article XI, Nassau County Public Health Ordinance.
- All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Nassau County Department of Health prior to their implementation. The permittee shall notify the Health Department 48 hours in advance of the start of construction.
- 3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to defend, indemnify and save harmless the County from suits, actions, damages and costs of every name and description resulting from the said project.

Name of Facility:	Г	٦	
	CHEMICAL MANAGEMENT INC.		
Mailing Address:			
	340 EASTERN PARKWAY		
	L FARMINGDALE NY 11735-	_1	
		_	

THIS FACILITY CONSISTS OF STORAGE AREAS AS LISTED ON PLANS AND APPLICATIONS FILED WITH THIS DEPARTMENT

Tank/Storage Area Number Capacity		Type of Toxic or Hazardous Material Stored		
0009	7500	CYANIDES		
0010	5000	WASTE OIL		
0023	250	TANK. WATER RINSE		
0024	150	TRADE NAME, ORGANIC		
0028	250	TANK, WATER RINSE		
0029	1200	LABORATORY CHMS/REAGENTS, NOS		

Authorizing Officer

John J. Dowling, M.D., M.P.H. Commissioner of Health

EH 768 9/86

THIS PERMIT MUST BE POSTED IN A CONSPICUOUS PLACE AT THE FACILITY

REFERENCE NO. 4



CHEMICAL MANAGEMENT INC.

CHEMICAL WASTE RECYCLE & DISPOSAL 972 NICOLLS RD. - DEER PARK, NEW YORK 11729 - (516) 586-0001

Chemical Management Incorporated (CMI) was founded in principle in the fall of 1978 in response to the demand from industry and government for proper disposal of industrial by-products and waste products. Heretofore, these materials were disposed of by industry, governmental agencies, and private citizens in a rather haphazard manner. As people recognized the deleterious effects that can occur with improper handling of waste materials, laws wre passed and regulations were adopted to try to eliminate these improper disposal practices. But laws in of themselves cannot solve the environmental question. Federal, state, and local laws set the ground work to clean up the environment, the next step of actually performing the work was left to industry.

Long Island, due to its geophysical characteristics, is inherently subsceptible to contamination of its ground water supply by any number of sactors including; resuse landfills, industrial discharges, household effluents and other types of disposal practices. It is therefore imperative that the people of Long Island lead the nation in its concern for environmental quality. The Long Island community has endeavored to do this in a number of ways. The most dramatic demonstration is the acceptance of refuse recycling plants for future garbage disposal. Flants that will recover valuables in addition to reducing the problems of space and pollution of landfill operations. Long Island must also lead the nation in the area of industrial waste product recycling and disposal. Rescurce recovery is the tey to the statem of land and water pollution. I simple example will itfustrate the point. On this Labor Tay weekend, how many quarts of motor oil was sold to consumers in Nassau and Suffolk counties? Where did this oil 30? Coviously into the engines of cars, trucks, vans and other vehicles. The question is: where did the ail that it replaced 30? Unfortunately it was probably the backyard, the sarbage can, or even perhaps the front curb. Obviously it did not go to a recycling center on Long Island because we don't have one. In essence this is the status of industrial waste products. Here, a useful commodity is not only being wasted but is actually contributing to ground water contamination because there is no one central facility available on Long Island to recover this type of material. CMI wants to help to eliminate ground water contamination by acting to treat and recover certain types of waste products. The proposed facility at 340 Eastern Parkway, Farmingdale is a proto-type operation to show the feasibility of recovering valuable resources while at the same time eliminating pollution discharges to the ground water.

There are two distinct areas that CMI wants to persue in resource recovery and treatment. The first area of operation is the numerous streams that are generated every day by industry of various acids and caustics containing valuable metals such as copper and silver. These metals cannot and should not be disposed of to the ground water. A better course of action would be a local facility engineered designed for the treatment of such



CHEMICAL MANAGEMENT INC.

CHEMICAL WASTE RECYCLE & DISPOSAL 972 NICOLLS RD. - DEER PARK, NEW YORK 11729 - (516) 586-0001

by-products. The end effect is a useful by-product for those streams capable of being recycled and proper disposal for those streams incapable of being recycled, with todays technology.

The second area of interest for CMI is actually two related areas and both concern the same waste by-product: Cil. Cil. as with most other products that our society uses, is both useful and harmful depending upon the time, place, quantity and other parameters. For instance, while it is good to have a major oil find in the nearby Gulf of Mexico that rivals Saudi Arabia, it is also a serious threat to the regions quality of life if it should become uncontrollable as has happened to Itoca I. So too is oil beneficial in numerous ways including not only as a heating fuel but also as a lubricant to reduce wear in automobiles and such places as machine shops on their cutting tools.

One of the major environmental threats that exists on Long Island that has not been addressed is that of waste oil. Actually it is not a waste product but rather a contaminated product that has the ability to be cleaned rather easily. All you really have to do to recover this product is to have the correct technology and the willingness to go out and do it. I've used the examples of the machine shop and automobile as a source for by-product oil for a good reason. The machine thop til is usually a water cil-emulsion that can be separated easily into usable cil and clean water. This technology is within the capabilities of CMI and is in-ture with the basic company philosophy of recovering valuable products from waste streams that are now potentially contaminants for the ground water. The management of CMI feels that this type of recovery operation could be supported by the many machine shops that exist on Long Island and could be operational in one to two years.

The by-product oil from automobiles, trucks and other engines is sych a vast problem in terms of quantity, location and recovery technology that CHI would not have the capabilities to even attempt to try to solve this problem alone. The management of CMI does feel though that they can contribute to help solving this problem in terms of aiding local government officials in defining the extent of the problem and then selecting the proper route to recovering this material into a useful form. As an example of what can be done, we should look to the State of North Carolina.

A plant is in the final stages of construction in North Carolina that will recycle two million gallons per year of motor oil from state owned vehicles. As compared to North Carolina's state government, how many vehicles are owned and operated on Long Island by different levels of government as well as the private sector? I think you can perceive the magnitude of the problem. Governmental response in this case is critical. CMI can and will lend its expertise to interested officials.



CHEMICAL MANAGEMENT INC.

CHEMICAL WASTE RECYCLE & DISPOSAL 972 NICOLLS RD. - DEER PARK, NEW YORK 11729 - (516) 586-0001

Figure 1 shows a schematic of the interrelationships that exists between water quality, tourism, community health, business and other parameters. What was attempted was to show that a regional treatment facility for Long Island would have direct beneficial effects on water quality, environment, new industry, and employment opportunities and indirect positive effects on the other variables listed. CMI is offering a chance to the Long Island community to take a quantum jump forward in terms of environmental quality.

Figure 2 is a schematic of the operations that will recover certain metals values at C"I's proposed plant. This proto-type operation will essentially divide the waste stream into three categories:

- 1) Waste streams to be recycled by the electrowinning operation.
- 2) Waste streams to be recycled by the precipitation operation.
- 3) Waste streams that are dilute for economic recovery will be precipitated and vacuum filtered to produce two products; clean water and a solid waste raterial that will be sent to approved industrial landfills in Pennsylvania.

REFERENCE NO. 5

New York State Department of Environmental Conservation

BLDG.#40, SUNY STONY BROOK, NEW YORK 11794 (516) 751-7900



January 8, 1980

Mr. Jack Leibel Chemical Management, Inc. 330 Eastern Parkway Farmingdale, New York 11735

Dear Mr. Leibel:

As per our conversation of 1/8/80, the department intends to issue your company a permit to construct and operate a Solid Waste Management Facility-Part 360.

Initially, the permit will allow you to construct and operate the portion of your plant needed for you to meet the sewer influent criteria of Nassau County Department of Public Works (Pretreatment).

After successfully demonstrating the ability to treat your own waste stream, you will be given permission to construct and operate the portion of your plant in which you treat your customers waste (Process).

Permission for the "Process" will be let via separate letter from this office. Material from a successful "Process" run will have to be stored in order to test the efficacy of your Pretreatment process, in a pilot run.

The initial test run on your "Pretreat" portion of your plant may be completed using solutions diluted to the representative concentration or range of concentration for which the process was designed.

Enclosed please find your layout with some comments indicated in red and yellow marker:

1- Design a berm around the drum storage to contain the contents of two (2)-55 gallon drums, i.e., a fork lift could puncture two drums simultaneously. Mr. Jack Leibel Chemical Management, Inc. PAGE II

- 2- Design berms around entrances to render the building a secondary container. These should be about 2" or 3" in height, dependent upon the slope of the floor.
- 3- Seal the floor and walls with a coating which will withstand the chemicals likely to be spilled thereon. The sealant should be applied to the wall to height consistent with height of bermed containment area.
- 4- The containment dike indicated on your drawing should contain at least the volume of your largest tank contained therein.

Please contact me, if I can be of any assistance to you in this matter.

very truly yours.

A. R. DeCostanzo,

Asst. Sanitary Engr.

ARD/ef Enc.

cc: D. Middleton

A. Machlin

M. Bruckman

R. Wegener w/encl.

REFERENCE NO. 6

PLKMIT

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		~ 4	

Under t	he Environmental Conse	rvation Law, Article 27, Title	7, Part 360	
	☐ CONSTRUCTION ☐ OPERATION	☐ INITIAL ISSUE ☐ RENEWAL	☐ REISSUAN ☐ MODIFICA	
PERMIT ISSUED TO		ADDRESS OF PERMITTEE	•	TELEPHONE NO.
LOCATION OF PROJECT Town	County	Environmen	ital Conservation Regional Office	
DESCRIPTION OF PROJE	ст		ON-SITE SUPERVISOR	

GENERAL CONDITIONS

- The permittee shall file in the office of the Environmental Conservation Region specified above, a notice on intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
- The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
- 3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
- 4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
- The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
- 6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS



ISSUE DATE ISSUING OFFICER SIGNATURE

PERMIT CONDITIONS

CHEMICAL MANAGEMENT, INC. 30-Z-01

MODIFICATION 10/01/81

- The following wastes are the only wastes that shall be accepted, stored, or treated at this site: acid and caustic solutions, heavy metal-liquids and sludges, halogenated and non-halogenated solvents, waste oils, and oil/water emulsions or mixtures.
- 2. The facility will not accept the following waste streams: polychlorinated biphenyls (PCB's), mercury, pesticides or waste solutions with over 0.02 oz./gal of cyanide (156 ppm).
- 3. A maximum of 150 drums of waste materials shall be stored on the premises at any one time. A maximum of 50 cubic yards of metal hydroxide sludge will be stored at any one time. No material will be stored outside.
- 4. Records shall be kept on-site of the following information:
 - (a). Name, Permit Number of Generators and volume and analysis or type of waste received by date and load.
 - (b). Name, Permit Number of Waste Hauler who brought in waste recorded in (a) above.
 - (c). Method of treatment, analysis, results of treatment on waste material received and reported in (a) above.
 - (d). Name and Permit Number of final disposition of all wastes processed and reported in (a) above. Noted: These records can be kept in the form of manifests where applicable and as required by State and Federal regulations.
- 5. A quarterly report summarizing the records kept under provision (4) shall be prepared and forwarded to the Department of Environmental Conservation, Region 1, Stony Brook, before the 15th day of the month following the end of each quarter year starting one month after this permit is issued. In addition, such report will state by volume and container the total material on hand both waste and processed on the close of the last business day of the quarter.
 - 6. Samples will be retained for each batch of waste material processed at the facility for a period of three months; these would include:
 - (a). Incoming wastes.
 - (b). Treated wastes.

PERMIT CONDITIONS - MODIFICATION 10/01/81
CHEMICAL MANAGEMENT, INC. #30-Z-01
PAGE II - CONID.

- 7. All water discharged from this site shall be batched and analyzed.

 That discharged to sewer shall meet or be less than Nassau County Sanitary Sewage limitations.
- 8. The company shall maintain a surety bond in a form and amount acceptable to the Department to cover closure costs of this site. A closure plan and the resulting bond shall be updated and submitted three months after the issuance of this permit and annually thereafter.

MB/ef 10/1/81 REFERENCE NO. 7

GEOHYDROLOGY OF THE LLOYD AQUIFER,

LONG ISLAND, NEW YORK

by Murray Garber

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 85-4159



Syosset, New York

GEOHYDROLOGY OF THE LLOYD AQUIFER, LONG ISLAND, NEW YORK

by Murray Garber

Abstract

The Lloyd aquifer contains only about 9 percent of the water stored in Long Island's ground-water system but is the only source of potable water for several communities near the north and south shores. The Lloyd aquifer is virtually untapped throughout most of central Long Island because current legal restrictions permit its use only in coastal areas.

The upper surface of the Lloyd aquifer ranges in depth from 100 feet below land surface on the north shore to more than 1,500 feet on the south shore. Aquifer thickness increases southward from 50 feet to about 500 feet. Transmissivity ranges from 1,500 to 19,000 feet squared per day. All recharge (35 to 40 million gallons per day) and nearly all discharge is through the overlying confining unit. Nearly all of the pumpage (approximately 20 million gallons per day) is in Queens and along the north and south shores of Nassau County.

Potable water can be obtained on most of Long Island in larger quantities and at shallower depths from other aquifers than from the Lloyd. Local contamination of these other aquifers, however, may require at least temporary withdrawals from the Lloyd in noncoastal areas. Significant withdrawals from the Lloyd aquifer may lower the potentiometric surface and thereby induce landward movement of sea water into the aquifer in coastal areas.

INTRODUCTION

The Lloyd aquifer is the deepest of Long Island's several aquifers. These aquifers are the sole source of water supply for more than 3.1 million people in Nassau and Suffolk Counties. Continuous clay beds overlie the Lloyd and retard vertical movement of water between it and the overlying aquifers; this maintains a relatively high artesian pressure in the Lloyd, even in the coastal areas, and preserves its potability even where the overlying aquifers have been invaded by seawater.

Pumping from the Lloyd aquifer has been restricted (with rare exceptions) since about 1955 by executive order of the New York State Department of Environmental Conservation (Anthony Candela, New York State Department of Environmental Conservation, oral commun., 1981) to the coastal areas of northern and southern Long Island, where in most places it is the only source of potable ground water. The most notable exception is in central Queens County, where the Jamaica Water Supply Company has been pumping 4 to 6 Mgal/d from the Lloyd since the mid-1930's.

As a result of this limitation on draft, the Lloyd aquifer remains relatively undeveloped throughout central Long Island and could provide an alternative, although limited, source of fresh ground water if the shallower aquifers there become contaminated. Excessive pumpage could, however, jeopardize the coastal water supply by lowering the potentiometric surface and thereby inducing excessive landward movement of sea water into the aquifer.

In 1979, the Geological Survey began a 5-year study titled "Regional Aquifer System Analysis of the Northern Atlantic Coastal Plain." The objective of that study (Meisler, 1980) was to define the geologic, hydrologic, and geochemical framework of the coastal-plain aquifer system and to develop a predictive computer model to investigate the system's response to various applied stresses such as extended drought or increased development. The complexity of this study necessitated a large amount of data, especially for model formulation and testing. These data were obtained through several subregional studies that were begun concurrently with the regional study.

Purpose and Scope

This report describes the geology and hydrology of the Lloyd aquifer on Long Island. It presents data on the aquifer's lithology, stratigraphic position, recharge rates, hydraulic properties, potentiometric-surface altitude, water movement, water use, and position of the saltwater interface. The information presented herein is summarized from published reports.

Location and Physiography

Long Island is about 120 miles long, less than 20 miles wide in most places, and has a total area of about 1,400 mi². The island comprises the counties of Kings, Queens, Nassau, and Suffolk, and trends about N75°E along its major axis, which is nearly parallel to the Connecticut shore (fig. 1).

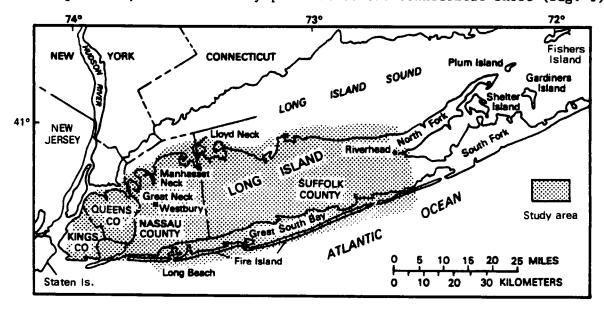


Figure 1 --Major geographic features of Long Island and location of study area.

The area of study includes all of Queens and Nassau Counties and parts of Kings and Suffolk Counties. The study area ends at the north and south forks just east of Riverhead, where the Lloyd does not contain potable ground water. The Lloyd aquifer does not extend into northwestern Kings County and contains saltwater in the southwestern part of that county.

Long Island lies entirely within the Atlantic Coastal Plain physiographic province (Lobeck, 1939, p. 956). The topographic features of Long Island are largely the result of glacial activity during the Pleistocene Epoch. The important topographic features are a generally irregular and precipitous north shore; a bifurcated morainal-ridge system that forms the north and south forks in the east and joins in western Nassau County to form a single ridge through Queens and Kings Counties (fig. 2), a gently sloping outwash plain that extends from the central part of the island southward to the shore, and several disconnected barrier beaches along the south shore that enclose a series of shallow interconnected brackish bays.

The morainal ridges—the Harbor Hill and Ronkonkoma terminal moraines—represent the farthest southward advances of continental glaciation during the Pleistocene Epoch. The outwash plain consists of sheets of sand and gravel transported from the melting glaciers by streams. The steep headlands along the north shore and the barrier beaches along the south shore were formed by erosion and deposition by wave action during postglacial time.

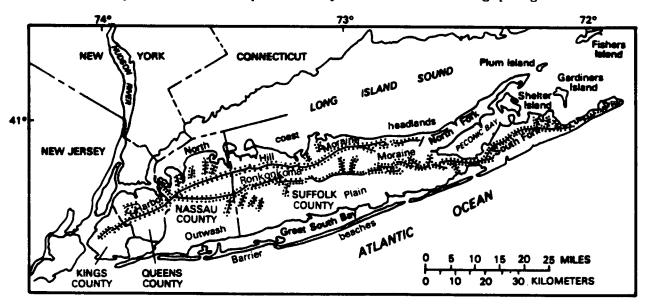


Figure 2.—Major physiographic features of Long Island. (Modified from Getzen, 1977, p. 7.)

Previous Work

The first comprehensive ground-water study of Long Island was published by Veatch and others (1906), who first used the name "Lloyd sand" to describe the material found in a well at Lloyd Neck (fig. 1) in northeastern Suffolk County. Fuller (1914) described the surficial geology of Long Island and included a thorough discussion of earlier published work on geology dating back to 1750. Suter (1937) evaluated the ground-water supply of Long Island

and made estimates of the potential ground-water yield in each county. Suter and others (1949, p. 9) mapped the geologic units on Long Island and named the unit the Lloyd Sand Member, assigned it to the Raritan Formation, and referred to the overlying clay bed as the unnamed clay member of the Raritan Formation. The name Lloyd aquifer (in the Lloyd Sand Member) was first used by Cohen and others (1968, p. 18).

Several early contributions to the knowledge of the hydraulics of artesian aquifers were based on observations of the Lloyd aquifer on Long Island. Leggette (1937) investigated interference between pumping wells, and Jacob (1940, 1941) investigated the elastic properties of the Lloyd aquifer.

References to data compiled and published during 1936-62, including records of wells, well logs, and water-level measurements in wells on Long Island, are listed at the end of this report.

Several reports on the hydrogeology of specific areas on Long Island have been published since the late 1950's. Among those that discuss the hydrogeology of the Lloyd aquifer are Perlmutter and Crandell (1959); Swarzenski (1959); Perlmutter and Geraghty (1963); Swarzenski (1963); Lubke (1964); Pluhowski and Kantrowitz (1964); Isbister (1966); Warren and others (1968); Soren (1971a, and 1971b); Jensen and Soren (1974); and Soren (1978).

Saltwater encroachment and the relationship between saltwater and freshwater in Long Island aquifers were described by Lusczynski and others (1956); Perlmutter and others (1959), Lusczynski and Swarzenski (1960, 1962, 1966); Lusczynski (1961, 1963); Isbister (1962); and Cohen and Kimmel (1971).

Several reports summarizing the regional hydrology and the effects of population and industrial growth on the ground-water resources of Long Island have been published since the mid-1960's. Heath and others (1966) outlined successive phases of ground-water development; Cohen and others (1968) published an atlas of Long Island's water resources; Franke and Cohen (1972) estimated rates of ground-water movement; Franke and McClymonds (1972) summarized the hydrologic situation on Long Island and calculated hydraulic coefficients from examination of data from about 2,500 wells; and Kimmel (1973) evaluated the changes in potentiometric head in the Lloyd aquifer that have resulted from development. Franke and Getzen (1976) reported on results of cross-sectional analog model experiments to determine aquifer properties; Getzen (1977) presented a three-dimensional analog model of the Long Island aquifer system, and Reilly and Harbaugh (1980) provided a summary documentation of their digital conversion of Getzen's analog model.

The potentiometric surface of the Lloyd aquifer before development (about 1900) was estimated and mapped by Kimmel (1973). Other potentiometric maps of the Lloyd aquifer were prepared by the U.S. Geological Survey's Long Island staff for the years 1947 (Lusczynski, 1952), 1971 (Kimmel, 1973), 1975 (Rich and others, 1975), and 1979 (Donaldson and Koszalka, 1983b). Maps of the potentiometric surface of the Magothy aquifer that were used in this study are as follows: 1972 (Koch and Koszalka, 1973); 1975 (Prince, 1976), and 1979 (Donaldson and Koszalka, 1983a). Specific stratigraphic problems were addressed by Perlmutter and Todd (1965), Sirkin (1974), and Perry and others (1975).

Acknowledgments

The author is indebted to Anthony Candela and Robert J. O'Reilly of the New York State Department of Environmental Conservation for their assistance in providing information used in this report; to Thomas Casey of Henderson and Casey; and to Daniel Davis, P.E., Superintendent, Water Department, Town of Hempstead, for samples and results of laboratory analyses of a deep test well at Roosevelt Field, Nassau County, N.Y.

GEOHYDROLOGIC SETTING

Stratigraphy

Long Island is underlain by unconsolidated sediments of Late Cretaceous and Pleistocene age that were deposited on a southeastward-sloping surface of crystalline basement rock (fig. 3). The wedge-shaped sedimentary mass is mantled by sediments of Pleistocene and Holocene age that cover virtually all of Long Island.

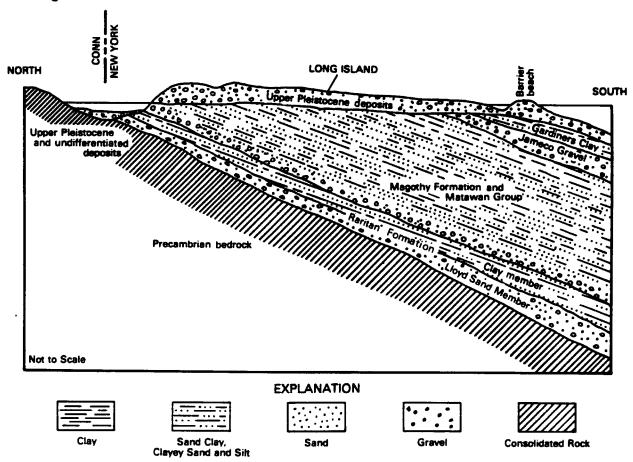


Figure 3.--Generalized geologic section of Long Island. (Modified from Cohen, Franke, and Foxworthy, 1968.)

Bedrock

The consolidated bedrock that underlies Long Island consists almost entirely of igneous and metamorphic rock--predominantly gneiss and schist with local occurrences of granodiorite along the island's northwestern margin, and scattered intrusive bodies of granite and pegmatite (Suter and others, 1949, p. 13). The bedrock surface is nearly planar and slopes generally southeastward with a gradient of 65 to 100 ft/mi. Bedrock depth ranges from land surface at a few locations in the northwest part of the island to about 2,000 ft below sea level on the south shore in western Suffolk County. A map showing the bedrock-surface altitude is given in figure 4. The bedrock surface beneath Long Island Sound, although not mapped in detail, maintains the general slope between Long Island and the New York and Connecticut mainland to the northwest.

A weathered zone overlies the bedrock surface in most places. This zone generally averages 20 to 30 ft in thickness but can be as much as 100 ft thick locally.

Raritan Formation

The Raritan Formation has been recognized in Cretaceous sediments as far south as central New Jersey (Perry and others, 1975, p. 1542). On Long Island, the Raritan Formation was deposited unconformably on the weathered bedrock surface and consists of the Lloyd Sand Member and an overlying unnamed clay member. The Raritan Formation as recognized in New Jersey consists of two sand members separated and capped by clay members. These are, in ascending order, the Farrington Sand Member, the Woodbridge Clay Member, the Sayerville Sand Member, and the South Amboy Fire Clay Member (Owens and others, 1970).

The stratigraphic correlation of the Raritan Formation of Long Island was revised by Sirkin in 1974. This work was based principally on palynological evaluation of core samples taken from a well (S21091) on Fire Island, a barrier island on Long Island's south shore (fig. 1). This well was drilled to a total depth of 2,014 ft and encountered weathered bedrock at a depth of 1,960 ft below sea level. Stratigraphic correlations from Perlmutter and Todd (1965, p. 3) and Sirkin (1974, p. 439) are also shown on the well log. The contact between the Magothy and Raritan Formations in this well, as depicted by Perlmutter and Todd, was moved downward by Sirkin from 1,150 to 1,790 ft below sea level, reducing Raritan thickness by about 80 percent from 810 ft to 170 ft. Perry and others (1975, p. 1,540) expanded Sirkin's correlations by tracing equivalent units of the Raritan and Magothy Formations of New Jersey into the subsurface of Long Island.

The biostratigraphic units that Sirkin found in the Fire Island well cannot be easily identified or traced by lithologic means in other wells on Long Island. Accordingly, the lithostratigraphic units used in this report are those used in previous studies.

Lloyd Sand Member. -- The Lloyd Sand Member was probably deposited as a series of braided streambeds and deltaic sediments. It consists of fine- to coarse-grained discontinuous sand and gravel beds with interbedded clay and

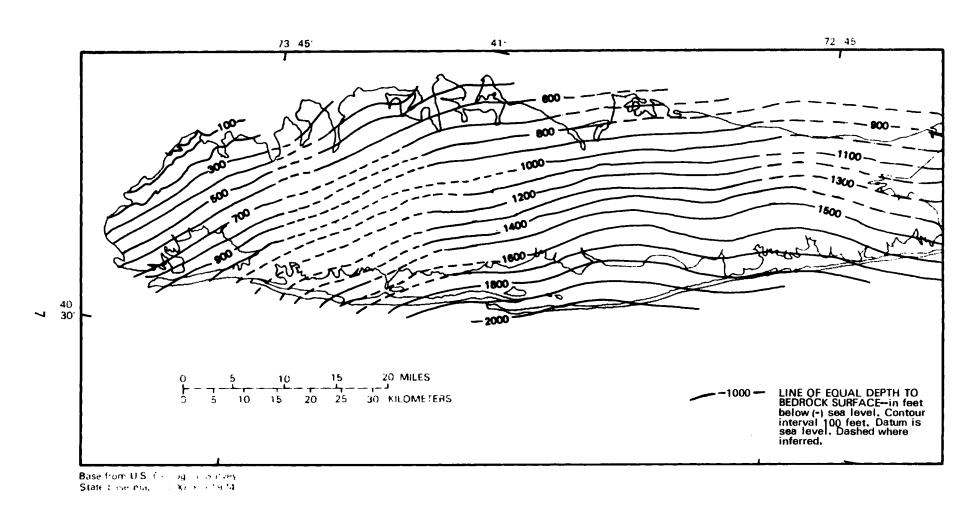


Figure 4.--Surface configuration of bedrock. (Modified from Suter, 1949, Soren, 1971, and Jensen and Soren, 1974.)

silt; the sand and gravel beds may contain varying amounts of interstitial clay and silt. The sand grains are generally clear or white but may also be gray or yellow. They may contain trace amounts of heavy minerals and, locally, lignite and iron oxide concretions.

No surface exposures of the Lloyd Sand Member have been found on Long The sand member underlies most of the island and probably extends offshore beneath Long Island Sound in Suffolk County and the eastern part of Nassau County and to a considerable distance beyond the south shore. Its actual seaward extent beyond the south shore of Long Island is uncertain: marine seismic surveys show unconsolidated sediments of Cretaceous age extending at least 5 mi beyond the barrier beaches (Mattick and Hennessy, 1980, p. 23). Although the exact lithology of these deposits is unknown, it seems likely that the Lloyd Sand Member and the overlying clay member of the Raritan Formation are contained therein and extend several miles offshore. The Lloyd Sand Member feathers out in western Long Island and has been thinned or removed by erosion and glaciation in northern Queens County and along the north shore of most of Nassau County. Post-Cretaceous erosion in northcentral Queens County produced a deeply incised valley in the sand member that was subsequently filled with sand and gravel deposits of Pleistocene age (Soren, 1971a, p. 19).

The Cretaceous deposits were partly removed from the northern margin of Nassau County by erosion during a pre-Wisconsinan stage, when sea level was much lower than at present (Swarzenski, 1963, p. 14). They were subsequently replaced by sand, gravel, and an overlying clay deposit that together appear to replicate the lithologic sequence of the Raritan Formation (Swarzenski, 1963, p. 11, 15, and 19). These deposits are of local importance and are discussed further on.

The Lloyd Sand Member lies at depths ranging from about 100 ft below sea level in northern Queens County to more than 1,500 ft below sea level on the south shore of Suffolk County. Thickness ranges from 0 along the western boundary in parts of Kings and Queens Counties to more than 500 ft in southwestern Suffolk County. The surface altitude and thickness of the sand member are shown in figures 5 and 6, respectively.

Clay Member.—The unnamed clay member of the Raritan Formation overlies the Lloyd Sand Member throughout most of Long Island. It consists principally of laminated, silty, light—to dark—gray clays with intercalated sand lenses and lesser amounts of red, white, yellow, and mottled clays and carbonaceous clay with layers of lignite and pyrite (Suter and others, 1949, p. 17). The amount of intercalated sand increases southward. Absence of marine fossils and the presence of carbonized plant remains indicates a nonmarine depositional environment.

The clay member of the Raritan Formation extends beneath most of Long Island, and outcrops of the upper few feet of the member have been found in parts of northern Queens County (Soren, 1978, p. 6, 1971, pl. 1). Like the underlying Lloyd Sand Member, it is believed to extend a short distance offshore beneath Long Island Sound. The clay member, like the Lloyd Sand Member, probably extends southeastward from the south shore, but its sand content increases southward and may be as much as 50 percent in the area of Fire Island (fig. 1).

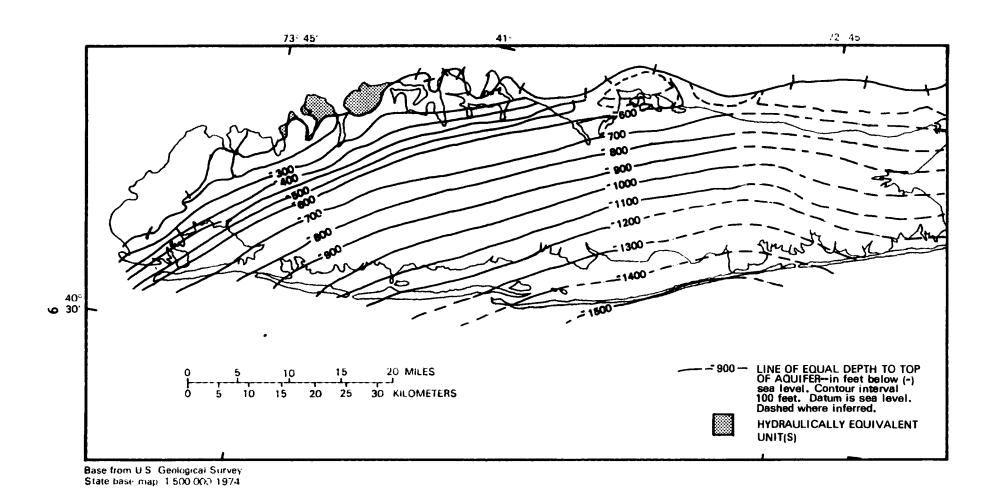


Figure 5.--Surface configuration of Lloyd aquifer. (Modified from Suter, 1949, Soren, 1971, and Jensen and Soren, 1974.)

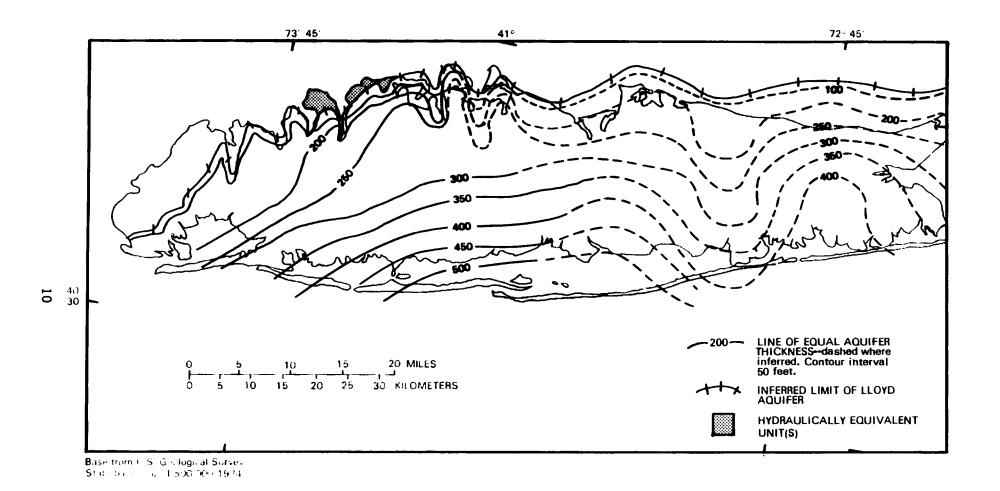


Figure 6.--Thickness of the Lloyd aquifer. (Modified from Suter, 1949, Soren, 1971, McClymonds and Franke, 1972, and Jensen and Soren, 1974.)

The clay member thins out in western Long Island (Buxton and others, 1981, p. 7) and has been removed in central and northern Queens County and northern Nassau County by post-Cretaceous erosion. The clay member is absent in the previously discussed narrow, north-trending valley through central Queens County; here the Lloyd Sand Member is overlain directly by post-Cretaceous valley fill.

The clay member occurs at depths ranging from several feet above sea level where it crops out in northern Queens County to more than 1,200 ft below sea level in south-central Suffolk County. Thickness of the clay member ranges from 150 to 250 ft throughout most of Long Island and thins near the north and west margins of the island. The surface altitude and thickness of the clay member are shown in figures 7 and 8, respectively.

Post-Raritan Deposits

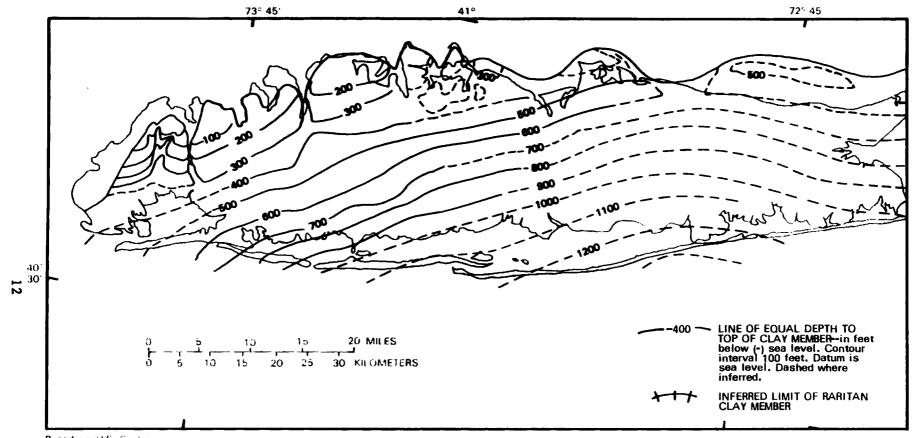
Sediments of the Cretaceous Magothy Formation and overlying Matawan Group were deposited unconformably on the Raritan surface. Magothy and Matawan sediments are conformable and have not been differentiated on Long Island. They consist of as much as 1,100 ft of fine- to medium-grained quartzose sand, silt, clay, and gravel beds that were deposited in a nonmarine environment, probably as deltaic and lagoonal-estuarine sediments (Perlmutter and Todd, 1965, p. 3). Magothy and Matawan sediments occupy most of Long Island except in western and northern Kings County, northern Queens County, parts of central Queens County, and parts of the northern margins of Nassau and Suffolk Counties.

These deposits have considerable relief (Suter and others, 1949, pl. XVII, XVIII; Jensen and Soren, 1974), especially in the western and north-central parts of Long Island, where extensive erosion occurred during the Pleistocene epoch. Where Magothy and Matawan deposits are absent, glacial deposits rest directly on the surface of the clay member of the Raritan Formation.

Marine deposits of the Monmouth Group unconformably overlie the Matawan Group (Jensen and Soren, 1974) in a narrow band beneath the south shore of Suffolk County (not shown on fig. 3) and extend an unknown distance southward. They consist of about 200 ft of dark-gray and black silty and sandy micaceous clay, greenish clay, and glauconitic sandy clay (Perlmutter and Todd, 1965, p. 4).

These Cretaceous sediments are covered by deposits of Pliocene(?), Pleistocene, and Holocene age. Pleistocene material was deposited on Long Island during glacial stades and interstades, possibly as old as Kansan age. Overlying the Pleistocene are Holocene deposits, which are found along the shores and in the valleys of some of the larger streams; these consist of beach and other shoreline deposits, salt-marsh deposits, and alluvial deposits. The subcrops of Cretaceous sediments and bedrock in Long Island Sound are probably covered by several feet of muddy Holocene deposits.

The Jameco Gravel, the oldest Pleistocene deposit on Long Island, is found in southern and central Kings and Queens Counties and in southwestern



Base from U.S. Geological ourvey State base map 1 500 cO: 1974

Figure 7.--Surface configuration of clay member of Raritan Formation.
(Modified from Suter, 1949, Soren, 1971, and Jensen and Soren, 1974.)

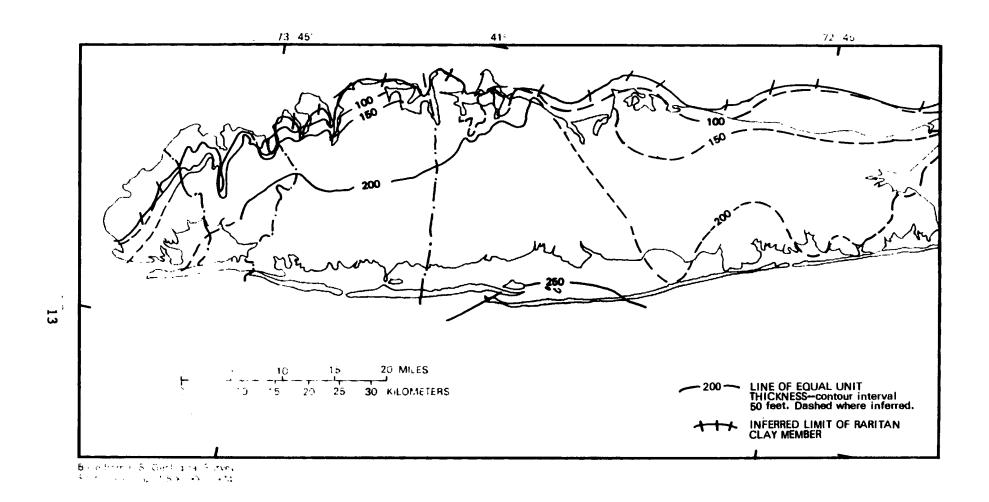


Figure 8.--Thickness of clay member of Raritan Formation. (Modified from Suter, 1949, Soren, 1971, and Jensen and Soren, 1974.)

Nassau County. It unconformably overlies Magothy and Matawan sediments, where present, or the clay member of the Raritan Formation in the buried valley that cuts through central Queens County. The Jameco Gravel is pre-Sangamon in age, perhaps Kansan or Illinoian (Soren, 1971a, p. 8-9).

The Gardiners Clay, a marine interstadial deposit of Sangamon age, unconformably overlies and overlaps the Jameco in western Long Island and extends eastward along nearly the entire south shore of Long Island. The Gardiners Clay is found only in a narrow subsurface band extending no more than 10 mi north of the barrier beaches. Its seaward extent is unknown.

Undifferentiated glacial deposits of Wisconsinan age blanket virtually all of Long Island. These consist of morainal and outwash deposits in the Harbor Hill and Ronkonkoma moraines.

On the northern margin of Nassau County, the Cretaceous sediments were deeply truncated by erosion during a pre-Wisconsinan stage of the Pleistocene, when sea level was much lower than at present (Swarzenski, 1963, p. 14). Subsequent glacial deposition in that area resulted in a sand-and-gravel deposit with an overlying clay bed in juxtaposition with the Lloyd Sand Member and Raritan clay (fig. 9). Swarzenski (1963, p. 15) assigned these Pleistocene beds to the Jameco Gravel and Gardiners Clay. Seismic studies (Grim and others, 1970, p. 659-660) show sediments extending beyond the north shore into Long Island Sound; these sediments have a seismic character similar to that of the Cretaceous sediments of Long Island but are probably the Pleistocene sand, gravel, and clay described above.

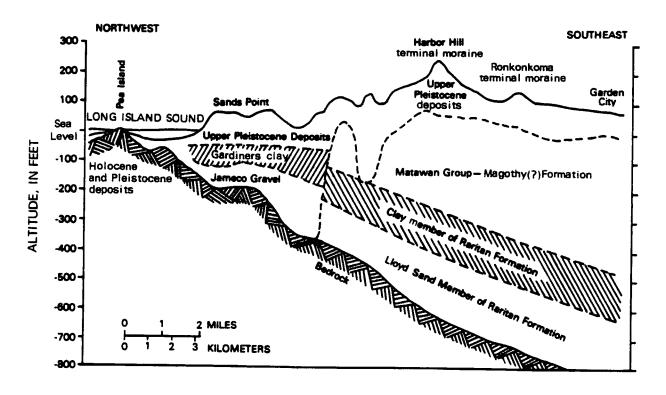


Figure 9.--Generalized section showing stratigraphic units in northwestern Nassau County, N.Y. (Modified from Swarzenski, 1963, p. 11.)

These deposits are probably not contemporaneous with the main body of the Jameco and Gardiners to the south, however, because their composition is different -- the Jameco Gravel deposits near the south shore contain abundant fragments of igneous and metamorphic rocks (Soren, 1978, p. 9), whereas the Jameco defined by Swarzenski (1963, p. 18) seems to be derived principally from Cretaceous deposits. If the Cretaceous sediments on the north shore of Long Island were truncated (as at present) before the deposition of the Jameco and Gardiners beds, and if the source area was to the north and northwest, as indicated by Swarzenski, the mineralogy of the main body to the south and the presumed outlier on the north would be similar, if not identical. Also, any deposits from an earlier glaciation to the north would probably have been destroyed by the advancing ice of the late Wisconsinan glaciation that formed the Harbor Hill and Ronkonkoma moraines. For these reasons, the Jameco and Gardiners (of Swarzenski) sediments in northern Nassau County are not contemporaneous with Jameco and Gardiners deposits to the south and were probably deposited during Wisconsinan time by detritus from nearby Cretaceous sediments filling depressions left by the advancing ice. Similar deposits have been found in other parts of the north shore.

Kilburn (1980) mapped these deposits in part of northern Nassau County and applied the hydrogeologic names Port Washington aquifer and Port Washington confining unit, respectively. The new names were applied to remove any allusion to correlation with Gardiners Clay and Jameco Gravel, and hydrogeologic terminology was used to include embedded outliers of the Lloyd Sand Member and clay member of the Raritan Formation.

Ground-Water System

The Long Island ground-water reservoir contains three extensive aquifers and several smaller aquifers of lesser thickness that have only local importance. Because the geology of Long Island has been described and mapped in lithostratigraphic terms and because little, if any, facies difference among units is recognized, the hydrologic units described below generally coincide with the lithostratigraphic units discussed in the previous section.

The three principal aquifers are the Lloyd, the Magothy, and the upper glacial aquifer. Of lesser thickness and areal extent are the Jameco aquifer, which is limited to Kings, Queens, and southwestern Nassau Counties, and the Port Washington aquifer (of Kilburn, 1980, formerly the Jameco of Swarzenski, 1963), which has been identified only in the north-central part of Nassau County. A similar deposit (the Jameco aquifer of Isbister, 1966) has been identified only in the northeastern part of Nassau County. The sediments of this unit are probably the stratigraphic equivalent of those of the Port Washington aquifer.

The Lloyd aquifer, as defined in this study, consists of the Lloyd Sand Member of the Raritan Formation and the confined contiguous sand beds of the Port Washington and Jameco(?) aquifers in northern Nassau County (fig. 9). Throughout most of Long Island, however, the Lloyd aquifer contains only the Lloyd Sand Member.

Extensive clay units of relatively low permeability (confining layers or beds) impede flow between the subjacent and overlying aquifers, thus restricting flow mainly to the lateral direction within each aquifer. A major confining unit, the Raritan confining unit, which is the clay member of the Raritan Formation (fig. 3), separates the Lloyd from the overlying Magothy aquifer throughout Long Island. The Gardiners Clay separates the Magothy from the overlying upper glacial aquifer along the south coastal areas of Long Island (Getzen, 1977, p. 8 and 14). Table I (page 30) summarizes the rock units and their water-bearing properties.

The sedimentary deposits are saturated from the water table down to the nearly impermeable crystalline basement, but isolated lenses of perched water occur at or near land surface in surficial or buried depressions underlain by material of low permeability. Perched water is more common at higher altitudes on Long Island, where the water table tends to be farthest below land surface and clay beds tend to be more numerous.

Water moves downward through the zone of aeration mainly by gravity until it reaches the water table. Movement in the upper part of the saturated zone is principally lateral toward nearby points of discharge such as streams, seeps, or springs, but some of the water moves downward to recharge deeper aquifers. The movement of water in the saturated zone is governed by the hydraulic gradients and distribution of conductivity.

Almost everywhere on Long Island, water in the zone of saturation just below the water table is under unconfined conditions—that is, the water table can rise or fall according to changes in the balance between recharge and discharge. In contrast, where a saturated aquifer is capped by a layer of relatively impermeable material (a confining layer) that restricts vertical movement of water, the water is said to be under confined, or artesian, conditions. In general, water in the upper glacial aquifer and in the upper part of the Magothy aquifer is unconfined except where the unit is capped by the Gardiners Clay. Where the Magothy is not capped by the Gardiners Clay, it is a "leaky" system vertically and acts as a water—table aquifer. The Lloyd aquifer is confined over virtually its entire extent by the Raritan clay; thus, water in the Lloyd is under artesian pressure.

HYDROLOGY OF THE LLOYD AQUIFER

Hydraulic Properties

Hydraulic conductivity, transmissivity, and storage coefficients of Long Island's aquifers have been calculated by many investigators. Methods used include interpretation of data from pumping tests, estimates based on data from specific-capacity tests, and interpretation of lithologic well logs. The most thorough and systematic approach was that of McClymonds and Franke (1972), whose results are based on data from about 2,500 wells. The mean hydraulic-conductivity value for the Lloyd aquifer, based on their study of 132 wells, is 48 ft/d, and mean transmissivity, based on a mean thickness of 240 ft, is $12,000 \text{ ft}^2/\text{d}$.

Ground Water

Recharge

Most of the recharge to the Lloyd occurs in areas where the water table is at high altitudes. It is at these locations that the vertical gradient is highest and a substantial downward component of flow is developed. Where the water table is highest, the potentiometric surfaces in the Lloyd and Magothy aquifers are also high, and because all aquifers on Long Island discharge directly or indirectly to the saltwater bodies surrounding the island, the potentiometric-surface configuration in the Magothy and Lloyd aquifers reflects that of the water table. The relationship between the water table and potentiometric surfaces of the Lloyd and Magothy is shown in profile in figure 10. The crest of the potentiometric surface of the Lloyd in this profile is about 4 miles north of the Magothy crest. Northward discharge from the Lloyd aquifer toward Long Island Sound is probably extremely small in this area. A map showing the water-table altitude before development (about 1900) is given in figure 11.

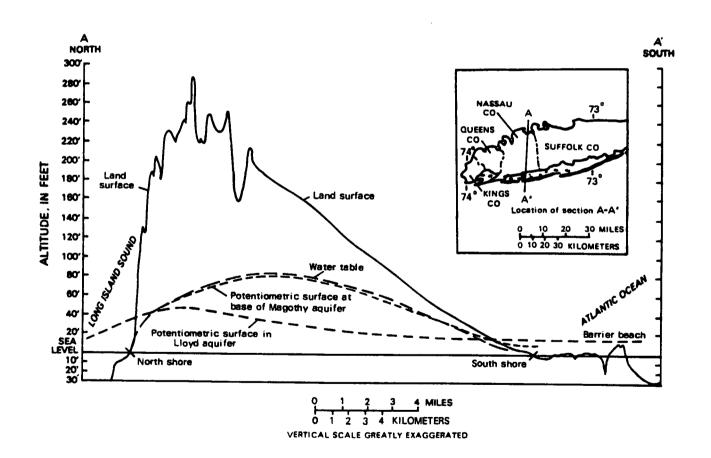


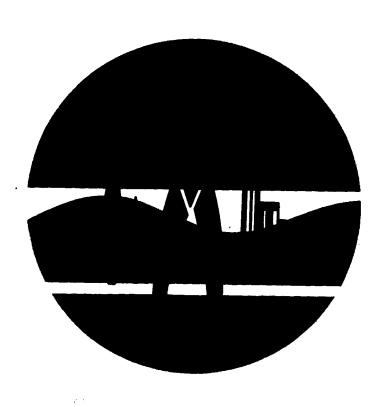
Figure 10.--Profile of the water table and potentiometric surface at base of Magothy aquifer and in Lloyd aquifer in 1963.

(Modified from Franke and McClymonds, 1972, p. 26.)

REFERENCE NO. 8

Catalog of Recharge Basins on Long Island, New York, in 1969

by
G. E. Seaburn and D. A. Aronson
U.S. Geological Survey



BULLETIN 70 1973

RECHARGE BASINS

Most of the recharge basins on Long Island are unlined open pits that dispose of storm runoff from residential, commercial, and industrial areas, and from highways (Seaburn, 1970). About 30 basins solely dispose of effluent from sewage-treatment plants. Those basins were not included in the study and are not considered in this report. The area of basins that dispose of storm runoff generally ranges from 0.1 to 30 acres and averages 1.5 acres. The average depth below land surface is 10 feet, but the depth of a few is as much as 40 feet. Storm runoff to recharge basins flows by gutters to street inlets. The street inlets are interconnected by sewers that carry storm water into the basins, where it infiltrates moderately to highly permeable sand and gravel deposits above the ground-water reservoir. Figure 2 shows the location of all the inventoried recharge basins that received storm runoff on Long Island in 1969.

Design and construction of recharge basins on Long Island is regulated and approved by the local governments. Available information on completed basins varies greatly in detail. None of the departments of local government maintains an up-to-date catalog of the type of data presented here.

SOURCES OF DATA

Data were compiled from several sources. These included engineering drawings of proposed land developments; maps of topography, water-table contours, geology, and soils; and aerial photographs.

Most of the data were obtained from engineering drawings of land developments filed with the local government's department responsible for regulating and approving construction designs. In general, the drawings contain the following information: A basin's location, date of construction, design capacity, actual capacity, dimensions, use, bottom altitude, overflow altitude, and land-surface altitude.

U.S. Geological Survey topographic maps were used to verify basin locations and land-surface altitudes of many basins. Aerial photographs were also used to verify basin locations.

The recharge basins were plotted on base maps from which the nearest street intersection as well as the latitude and longitude of each basin were determined.

A water-table contour map developed by Kimmel (1971) was used to estimate water-table altitudes below each basin. Geologic maps (Fuller, 1914; Perlmutter and Geraghty, 1963; Swarzenski, 1963; Lubke, 1964; Isbister, 1966; and Soren, 1970) and soil maps (Lounsbury and others, 1928; and Warner, 1969) were used to determine geologic and soil environment at each basin.

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11 CAHM!	M AVFOLD WESTHURY RD. R-MARIZANA AVE.	40 44 24	73 33 16	52 4		410.000	47.300	50 100	. 0	61.0 117.5	49.0 66.0	24.4*	Ú	3	1	5
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REFERENCE NO. 9

02-874-04

NUS CORPORATION

ÌI

0071

Circuitron Corp.
TDID* 02-8704-04
Project Manager: D. Grupp
Logbook * 0071
Hay 12, 1987

02-3704-04 CREWIRON CORPORATION 845 Nus Personnel arrive on site. David Grup - Hojart Manager Dane Truse - Site Safe Janlang - Survey Joe Mustange - Survey Weather: Sunny clear 60-70 F focking lot in front of building is full of ans Building vacant We went to adjoining buisinestes to have employed cos moved so we can work in the area. SPDES goods, Sanitary lads wells & storm have are in the parking lot. Building is industral area we will be working in front of the builting so we will be very visable. 9:00 Site owners - 82 MIBAR CORP. OF Tive on Site Rulof D'Amato Julius D'Amato were not aware monitoring wells were on site I pointed them out to them 515 Begin setting up decon area.

OUA 5 #464759 Field Ship Endogneter D #307151
Fill Trady Sti3/87 HNU & =307146 Fiddy 5/2/87 SCBATS 307173 Diane TRUBE 192033 Toe Mustaugh 428552 Johns 940 The Martaugh of Diane Trube begins suiting up to screen of maure wells. Jon Lang will be modified level B Popety is open a accessible. Very busy industrial/commercial area 1005 Joe & Down on are to monter Wel upgradient well on west side of building gen well OUA - organ HNU Degm 9 mm 8/24/87

Cracintan Corporation 107-8704-04 1000 Taking well depth measurements 4" Popof casing to grow. wells are flush to ground water level acft 2 in. 1015 finished with 1st well 1018 Begin Screening & measuring 2" upgradient well feet from an N. W. connex of the building 1+NU Jan Then dopped back to Oppose Water level - 26ft 10m from ground suffere well depth. 29ft. 6m 3 in topo fraging 1026 Foreshood at 2nd well. Sandar off air 1030 GO to daysondient wells brone to the back on at begin screening & measuring well on Southeast asner Hou-Ofen ale level - 28'11" for grown surface well depth 30 4" Top of any 3" below ground 1040 Fourthed at well on southeast acres as we at middle of building After distribuy water OUASporm well in middle of building 1046 Dells boyn ringing 104" Top of casing to Gound 2" 1050 Drang & Joe off air changing tanks 3/24/87

1056 Diane & Joe buck on AT 10 to well at NE as not of building out oppn offer tichno Sppm Hun oppn wher level 28'7" Top of Casing 3 well depth 29'2" 1105 finished at well Diano & the off ax 1110 Jm Long of Myself will so go in the building boto. The site once would like to leave Joe Murtauch will provide one of site on the building Sout I we will enter building 1st & screen with OUT, It NU & Explosionate to defermine safe areas within the building Diane will come site ratety officer daties from Jam long + will, be stationed on side the building Julia D'Amato gaid there are draws in side that were left by C-revitan. They had Chemical Management Inc. Simple +label auch dram. 1129 D. Trube is documenting recompaisance. D. Grupp and J. Lang on air with full SCBA tanks. J. murtaugh on back-up. Crew & owners entered building w/ OVA, HNu, mini-rad. explosimeter + cameras. Slide camera has flash attachment. Line - of - sight maintained to exit. Recon continues in building 1145 David Obrig (Suffork Co. Health Dept.) arrives 1200 and entered enters building. 8/24/87

[6560-01]

(FRL 910-3]

AQUIFERS UNDERLYING NASSAU AND SUFFOLK COUNTIES, NEW YORK

Determination

Notice is hereby given that pursuant to Section 1424(e) of the Safe Drinking Water Act (42 U.S.C. 300f, 360h-3(e); 88 Stat. 1660 et seq.; Pub. L. 93-523) the Administrator of the Environmental Protection Agency has determined that the aquifer system underlying Nassau and Suffolk Counties, Long Island, New York, is the principal source of drinking water for these counties and that, if the aquifer system were contaminated, it would create a significant hazard to public health.

BACKGROUND

The Safe Drinking Water Act was enacted on December 16, 1974. Section 1424(e) of the Act states: "If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole of principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Feneral REGISTER. After the publication of any such notice, no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to pian or design the project to assure that it will not so contaminate the aquifer."

On January 21, 1975, the Environmental Defense Fund petitioned the Administrator to designate aquifers underlying Nassau and Suffolk Counties, Long Island, New York, as a sole source aquifer under the provisions of the Act. A notice of receipt of this petition, together with a request for comments, was published in the Feneral Register. Thursday, June 12, 1975. Written comments were submitted by the Environmental Defense Fund (EDF) on August 7, 1975, supporting their petition. A letter from the Director of the Nassau-Suffolk Regional Planning Board, dated October 1. 1976, requested that designation be delayed until after the completion of the areawide waste management (208) planning process for Long Island.

Because of the limited response to the FEDERAL REGISTER notice, EPA issued a press release and mailed an information sheet to elected officials and environmental groups on Long Island in March 1977. In addition, a presentation was made to the Citizens Advisory Committee (CAC) of the 208 planning agency and to the executive committee of the Long Island Water Conference. In response to these activities EPA received three comments: a letter from EDF questioning why project review would exclude direct Federal projects, a letter from a member of the East Hampton Planning Board expressing support for the designation. and a letter from the CAC requesting that designation be delayed until after the completion and approval of the Long Island 208 plan.

In considering the comments received, we could not agree with the letters requesting further delay since we do not believe that the review process under Section 1424(e) will constrain the options of 208 planning.

On the basis of the information which is available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

(1) The aquifers underlying Nassau and Suffolk Counties are the sole or principal drinking water source for the area. They supply good quality water for about 2.5 million people. Current water supply treatment practice for public supplies is generally limited to disinfection for drinking purposes, with some plants capable of nitrate removal. There are also numerous private sources. There is no alternative source of drinking water supply which could economically replace this aquifer system.

(2) The aquifer system is vulnerable to contamination through its recharge zone. Since contamination of a ground-water aquifer can be difficult or impossible to reverse, contamination of the the aquifer system underlying Nassau and Suffolk Counties. New York, would pose a significant hazard to those people dependent on the aquifer system for drinking purposes.

Among the determinations which the Administrator must make in connection with the designation of an area under Section 1424(e) is that the area's sole or principal source aquifer or aquifers, "if contaminated, would create a significant hazard to public health . . " Obviously, threats to the quality of the drinking water supply for such a large population could create a significant hazard to public health. The EPA does not construe this provision to require a determination that projects planned or likely to be constructed will in fact create such a hazard: it is sufficient to demonstrate that approximately 2.5 million people depend on the aquifer system underlying Nassau and Suffolk Counties as their principal source of drinking water, and that the squifer system is vuinerable to contamination through its recharge zone.

Section 1424(e) of the Act requires that a Federal agency may not commit funds to a project which may contaminate the aquifer system through a re-· charge zone so as to create a significant hazard to public health. The recharge zone is that area through which water enters into the aquifer system. Because of groundwater movement within these aquifers, the recharge zone is considered to be the entire area of Nassau and Suffolk Counties. However, both horizontal and vertical boundaries of the recharge zone are discussed in the background document under the section entitled "Area of Consideration."

The data upon which these findings are based are available to the public and may be inspected during normal business hours at the office of the Environmental Protection Agency, Region II. 26 Federal Plaza, New York. New York 10007. It includes a support document for designation of the acquifers underlying Nassau and Suffolk Counties. New York, and maps of the area within which projects will be subject to review.

A copy of the above documentation is also available at the U.S. Waterside Mall. Environmental Protection Agency, Public Information and Reference Unit. Room 2922, 401 M Street S.W., Washington, D.C. 20460.

The EPA has issued proposed regulations for the selective review of Federal financially assisted projects which may contaminate the aquifer system underlying Nassau and Suffolk Countles, New York, through the recharge

zone so as to create a significant hazard to public health. These proposed regulations were published in the FEDERAL REGISTER issue of September 29, 1977, and public comments were requested. They will be used as interim guidance for project review until their promulgation during 1978.

EPA. Region II, is working with the Federal agencies which may in the near future fund projects in the area of concern to EPA to develop interagency procedures whereby EPA will be notified of proposed commitments for projects which could contaminate the bicounty area's sole source aquifer system. Although the project review process cannot be delegated, the Regional Administrator in Region II will rely to the maximum extent possible upon any existing or future State and local control mechanisms in protecting the ground-water quality of the aquifer system underlying Nassau and Suffolk Counties, New York, Included in the review of any Federal financially assisted project will be coordination with the State and local agencies. Their determinations will be given full consideration and the Federal review process will function so as to complement and support State and local mechanisms.

Dated: June 12, 1978.

Douglas M. Costle.
Administrator.

IFR Doc. 78-17967 Filed 6-20-78; 8:45 am]

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual (HW-10)

Originally Published in the July 16, 1982, Federal Register

United States
Environmental Protection
Agency

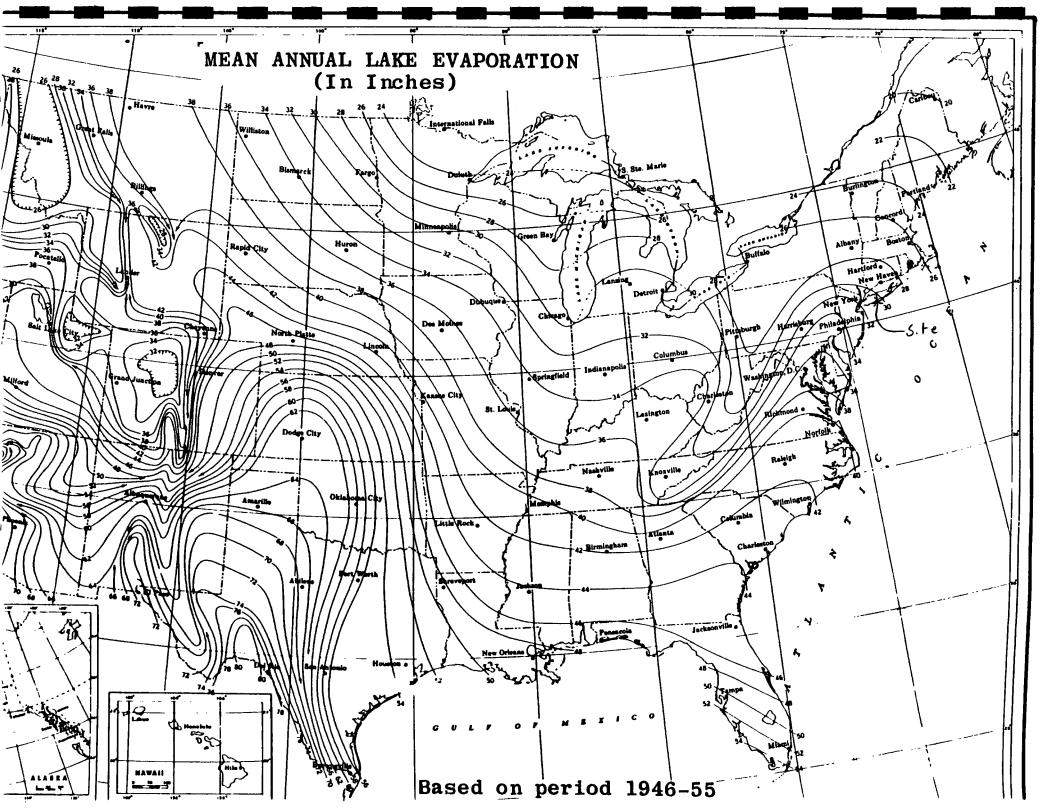
TABLE 2
PERMEABILITY OF GEOLOGIC MATERIALS*

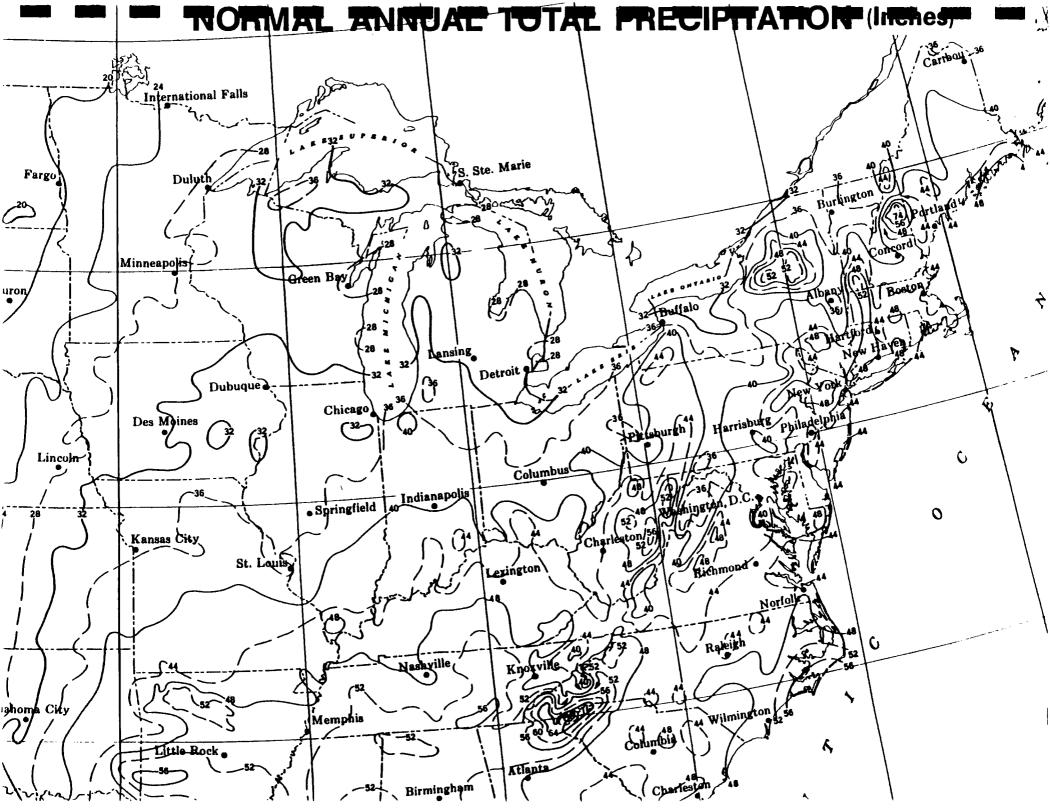
Approximate Range of Hydraulic Conductivity	Assigned Value
<10 ⁻⁷ cm/sec	0
10 ⁻⁵ - 10 ⁻⁷ cm/sec	1
10 ⁻³ - 10 ⁻⁵ cm/sec	2
>10 ⁻³ cm/sec	3
	Hydraulic Conductivity <10 ⁻⁷ cm/sec 10 ⁻⁵ - 10 ⁻⁷ cm/sec 10 ⁻³ - 10 ⁻⁵ cm/sec

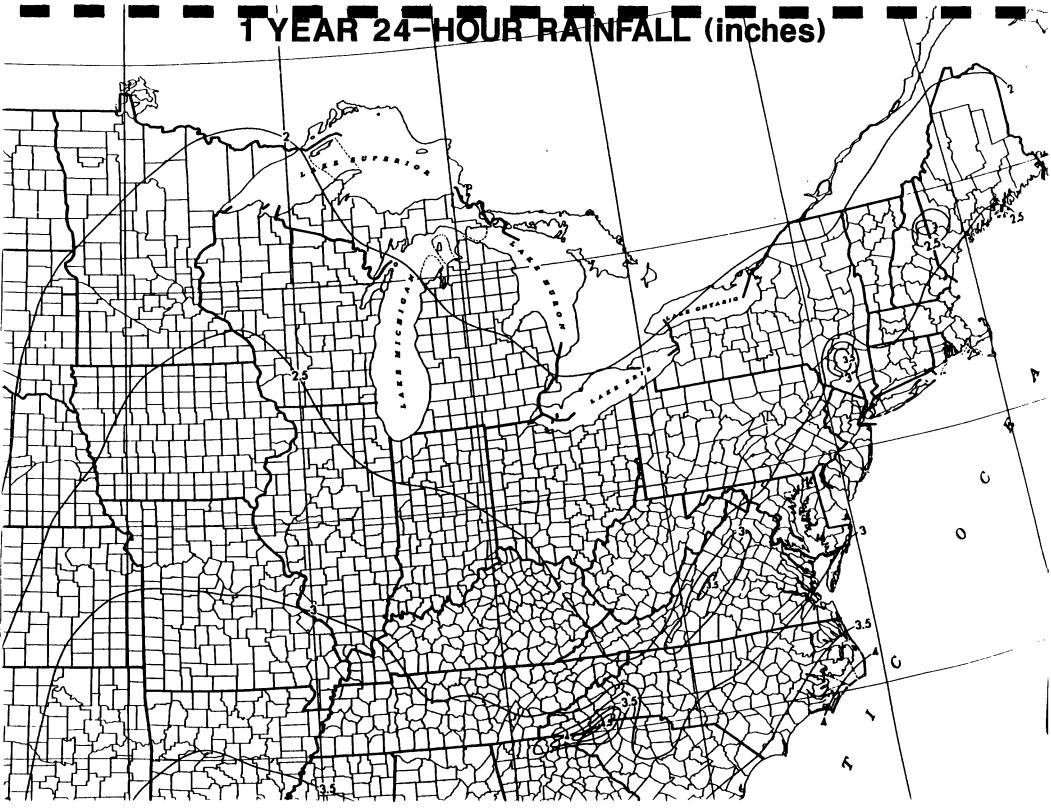
^{*}Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWest ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979









NASSAU COUNTY

ID NO COMMUNITY WATER SYSTEM	POPULATION	SIDURCE
Municipal Community		
Municipal Community 1 Albertson Water District. 2 Bayville Village. 3 Bethpage Water District. 4 Bowling Green Water District. 5 Carle Place Water District. 6 Citizens Water Supply Company. 7 Deforest Drive Association. 8 East Meadow Water District. 9 Farmingdale Village. 10 Franklin Square Water District. 11 Freeport Village. 12 Garden City Park Water District. 13 Garden City Village. 14 Glen Cove City. 15 Hempstead Village. 16 Hicksville Water District. 17 Jamaica Water Supply Company. 18 Jericho Water District. 19 Levittown Water District. 20 Lido-Point Lookout Water District. 21 Locust Valley Water District. 22 Long Beach City. 23 Long Island Water Corporation. 24 Manhasset-Lakeville Water District. 25 Massapequa Water District. 26 Mill Neck Estates Water Supply. 27 Mineola Village. 28 New York Water Service. 29 Old Westbury Village. 30 Oyster Bay Water District. 31 Plainview Water District. 32 Plandome Village. 33 Port Washington Water District. 34 Rockville Centre Village. 35 Roosevelt Field Water District. 36 Roslyn Water District. 37 Sands Point Village. 38 Sea Cliff Water Company. 39 Sel-Bra Acres Water Supply. 40 South Farmingdale Water District. 41 Split Rock Water District.	. 13500	. Wells . Well
Water District	32000	.Watis
Non-Menicipal Community		
46 Community Hospital at Glen Cove 47 Planting Fields Arboretum 48 Stuart, Walker, Zimmer Water Supply	. 1350 90 41	. Wells . Wells . Hells

TE DEPARTMENT OF HEALTH VIRONMENTAL PROTECTION BRONX, KINGS, NASSAU, NEW YORK, QUEENS and RICHMOND COL ILIC WATER SUPPLY PROTECTION CONNECTICUT Eatons Neck Lloyd Point Smithtow Bay ew Rochelle GREAT Lindenhurst BABYLON BERT MOSES STATE MAR 3-mile radius

SUFFOLK COUNTY

20	COMMUNITY WATER SYSTEM	POPULATION	SOURCE			
Mai	nicipal Community					
1234567890 1 11234 567890 1 1234 567890 1 1234 567890 1 1234 567890	Bevon Water Corporation. Brentwood Water District. Bridgehampton Water Company. Captain Kidd Water Company. Crab Meadow Beach. Culross Corporation (Culross Dering Harbor Village. Dix Hills Water District. East Farmingdale Water Distrifishers Island Water Works Corporation. Greenlawn Water District. Greenlawn Water District. Hampton Bays Water District. Hampton Bays Water District. Herod Point Association. Herod Point Association. Herod Point Association. North Shores Water Company. Ocean Beach Village. Reeves Beach Water Company. Riverhead Water District. Roanoke Water Corporation. Saltaire Village. Scott's Beach Water Company. Shelter Island Heights Association. Shorewood Water Corporation. Soundview Association. South Huntington Water District Suffolk County Water Authority Swan Lake Water Corporation.	1150. 25812. 1916. 580. 580. 580. 500. 8000. 7850. 40000. 6851. 9500. 500. 500. 6851. 9500. 155. 650. 9300. 155. 9300. 155. 9300. 155. 9300. 155. 9300. 9359.	Wells	- Middle Farms	and Treasu	re Ponds, Wells
31	Terrace-on-the-sound	• • • 1485	_Wells			
32 1	Woodbury Triangle Corporation.		-Wells -Wells			
33 A 34 E 35 C 36 C 37 C	unicipal Community Aquebogue Mobile Home Court. Brookhaven National Labs. Calverton Hills Owners Association. Cedar Lodge Nursing Home. Central Islip Psychiatric Cente Facility.		.Wells .Wells .Wells .Wells			
19 E	Facility. ast Quogue Mobile Estates. ood Samaritan Hospital. reis Mobile Park.		₩elis			
11 G	reis Mobile Park.	· · · · · NA · · ·	₩elis ₩elis			
3 K	ings Park Psychiatric Center.	3100	Wells Wells			
5 La 6 La	ake Hurst Lodge Adult Home.	· · · · · NA. · -	Wells Wells			
7 L: 8 Mc	ittle Flower Children's Service	es. : .150	Wells Wells			
9 Na O No	apeague Trailer Park.	· · · · 10: · · · · 78:	Wells Wells			
1 Oa	ak Park Trailer park	• • • 3000	Wells			
3 Pa	ork Lake Rest Home	74 1	Melis Melis			
5 Pe	CODIC River Trailer neal	· · · 37\	#ells			
7 Pi	Necrest Garden Angeland	ark /U	re IIs			
Ra Ri	mblewood Mobile Homes. dge Rest Home.		Wells Wells			
) Ro	CKY Point Family House		Me IIs			
St	Joseph Convent - Long	· · · · · · · · · · · · · · · · · · ·	Rė!!s			
Sai	M A Lewison Start Contain	1177w	le i i s			
Sou	uth Bay Adult Home	· · · · 40 W	Hells			
Spe	eonk Mobile Home Bank	1000 W	e lls			
Thi	ree Mile Harbor Trailer Danie	3200	Bils .			
		· · · · 40 W	Blis			
Thu	urm's Mobile Estates. CG Station - Moriches. s Dubicki Apartments	450 W	BIIS			

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982 LONG SUFF. Eatons Neck Old Field Point Lloyd Point Mt Misery Point MATIONAL NECK SMOTS Old Belle 28 Smithtown Field Miller Place 31 Sound Beach 14 Port effection Salonga Bay STATE PARK Mingron Nonhoon Bay Huntington 288each Halestre Port Jefferson old Spring eniawn East₂₈ Hunting da Nonthport _38 CT. Stosse, Midd. Woodbur Centereach BROOKE Nesconset 54 28 Gordon o Heights lauppauge 53 ponkoma ast Half Hollow 2 (3) 4 OIDIOOK 28 ISLIP MAC ARTHUR Holtswille Medford (le) Brentwo da .62 (iii a Parchoque Hagerhan Belloc 88428 Baydon S. Porej., West Bellport viaters HECKSCHER STATE PARK TEARY (STASS NATIONAL GREAT Lindenhurst ϕ_{UTH} CAPTREE STATE PARK BABYLON TSLAND ROBERT MOSES STATE DADY

Work Sheet for Population Served by Groundwater within Three miles of the Chemical Management Site.

Nassau Co	unty		
ID No.	Community Water System	,	Population Served
3	Bethpage Water District		32000
9	Farmingdale Village		794/2
31	Plainview Water District		40000
40	South Farmingdale Water District		49900
	U	tetal	129,846
Suffolk Co	sunty		
ID Na	Community Water System		
9	Easif Farmingdale Water District		7850
27	South Huntington Water District		51260
	V	total	59110
	Nassau Co	unty	129846
	Suffolk Cou	N /	59110
	′/	8 7	88,956

-

OSRIRF 10/12/87 Page 1 of 5

PRELIMINARY ASSESSMENT OFF SITE RECONNAISSANCE INFORMATION REPORTING FORM

Date: $\frac{1}{1/89}$	
Site Name: Chemical Management	TDD: <u>02-8801-09</u>
Site Address: 340 Eastern Parkway Street, Box, etc.	
Farmingdale Town	
Nassau County	
New York State	
NUS Personnel: Name	Discipline
P. von Schondorf	
B. Deitz	
J. Hannay	
Weather Conditions (clear, cloudy, rain, snow, et	c.):
Estimated wind direction and wind speed:	
Estimated temperature: 34°C	
Signature: <u>Buan Dutty</u>	Date: ////89
Countersigned: Herald Hanny	Date:

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date:	111/89	
Site Name:	Chemical Management, Inc.	TDD: <u>02-8901-09</u>
Site Sketch:	:	
Indicate Provide	e relative landmark locations (st locations from which photos are	reets, buildings, streams, etc.). e taken.
NÎ		frailers
Rating Lat	295 Mago. Toward	Industrial area Phascal Phascal Phascal CMingranage CMingranage Continue Storage Park Storage Park Continue Contin
Signature:	Brian Duty	Date:

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date:
Site Name: Chemical Management, Inc. TDD: 02-8901-09
Notes (Periodically indicate time of entries in military time):
0845 anne at site
Facility is located on southern side of Castern Parkway. S.D.
Surrounding area is a combination of industrial and
residential properties Large water town wit West Farmingdale
Il selve at in invalenced
by presence of warkers schwing forkliftsrand trailer trucks parked
on property. Facility slope appears to be less than 1%
(very flat & Facility consists of 3 buildings /garage /worthouse
Tre short an office warehouse and I office
trailers. Faculity to Across the street from the
facility are other industrial facilities. Plantof
which also active One is an average manufacturer,
BHE Lite is fenced and access is limited. Drainage B.D.
Workers on site near loading/pit area dressend in
livele w/ gloves. Pa Drums and cardboard containing m
Pallets were observed in worehouse G 340 Fastern Blod.
360 Eastern BWD is CMI offices.
0919 Left suto.
\mathcal{D} \mathcal{D}
Signature: Buan Diety Date: 1/1/89 Countersignature: Meral & Mannay Date: 1/16/89
Countersignature: Herald Hannay Date: 1/16/99

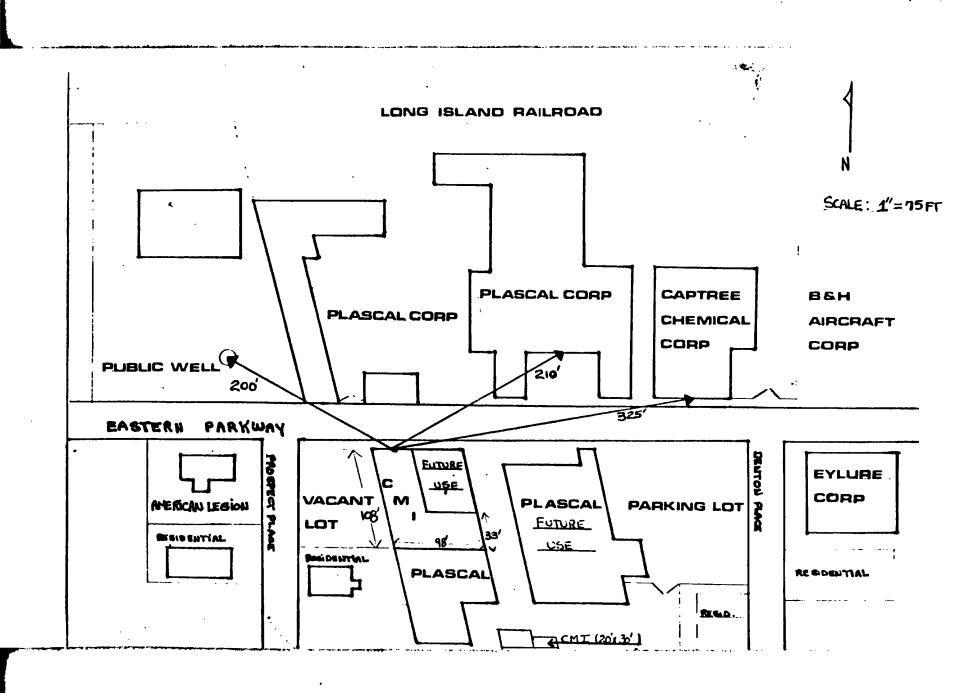
PRELIMINARY ASSESSMENT INFORMATION REPORTING FORM

Date:	
Site Name:	TDD:
Notes (Cont'd):	
Attach additional sheets if necessary. and countersignature on each.	Provide site name, TDD number, signature,
Signature:	Date:
Countersignature:	Date:

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Photolog: Frame/Photo				
Number F1/P1	Date	<u>Time</u>	Photographer	Public water supply-propert
	1/11/89	9:00	Gerald Hanney	sign. Across from site
F1/51	/•	<i>"</i>	′,	1
Fa/sa		9:05	Gerald Hannaj	Site looking East on Easter blud,
F2/pR	//	11	"	11 11
F3/P3	11	9:10	//	At Site looking South
F3/5,	//	//	11	//
	1,	9:15	11	Site South at truck unloading
F4/5,	11	//	1-	dock and dumpster
Attach addition	nal sheets if nature on ea	necessary. I	Provide site name, T	DD number, signature,
Signature: <u>H</u>	nolds.	Hannay	Date:	1/11/89
Countersignatu	re: <u>B/U</u>	an Diet	Date:	1/11/89



THOMAS S. GULOTTA COUNTY EXECUTIVE



DEPARTMENT OF HEALTH 240 OLD COUNTRY ROAD

MINEOLA, NEW YORK 11501

JOHN J. DOWLING, M.D., M.P.H. COMMISSIONER

FRANCIS V. PADAR, P.E., M.C.E. DEPUTY COMMISSIONER DIVISION OF ENVIRONMENTAL HEALTH

March 23, 1987

Miss. Diane Trube NUS Corp. Raritan Plaza Three Fieldcrest Ave. Edison, N.J. 08837

Re: Public Supply Well Information

Dear Ms. Trube:

Enclosed is the information which you requested for the Village of Farmingdale water supply.

As soon as available, I will send you this information for all public water supplies in Nassau County. In the meantime, if I can be of any further assistance, do not hesitate to contact me.

Donald H. Myott, P.E. Chief, Office of

Groundwater Management

Bureau of Public Water Supply

DHM:da Enc.

RECEIVED

Maa 5 987

NUS COMPOSITION KI BUR II SENT TO

repulvedali villaci (os)

CHB-0081

TOB

36: Main Strect

Farmingdale, MY 11775

Official: Willie Carman

Max mi

Consult: H2M

Enryphanic order to the composition in the property

Population: 8.316 (1981)

Trestment: Lemetic Sode(tl L).Lime(#I-1).Polyphosphete.

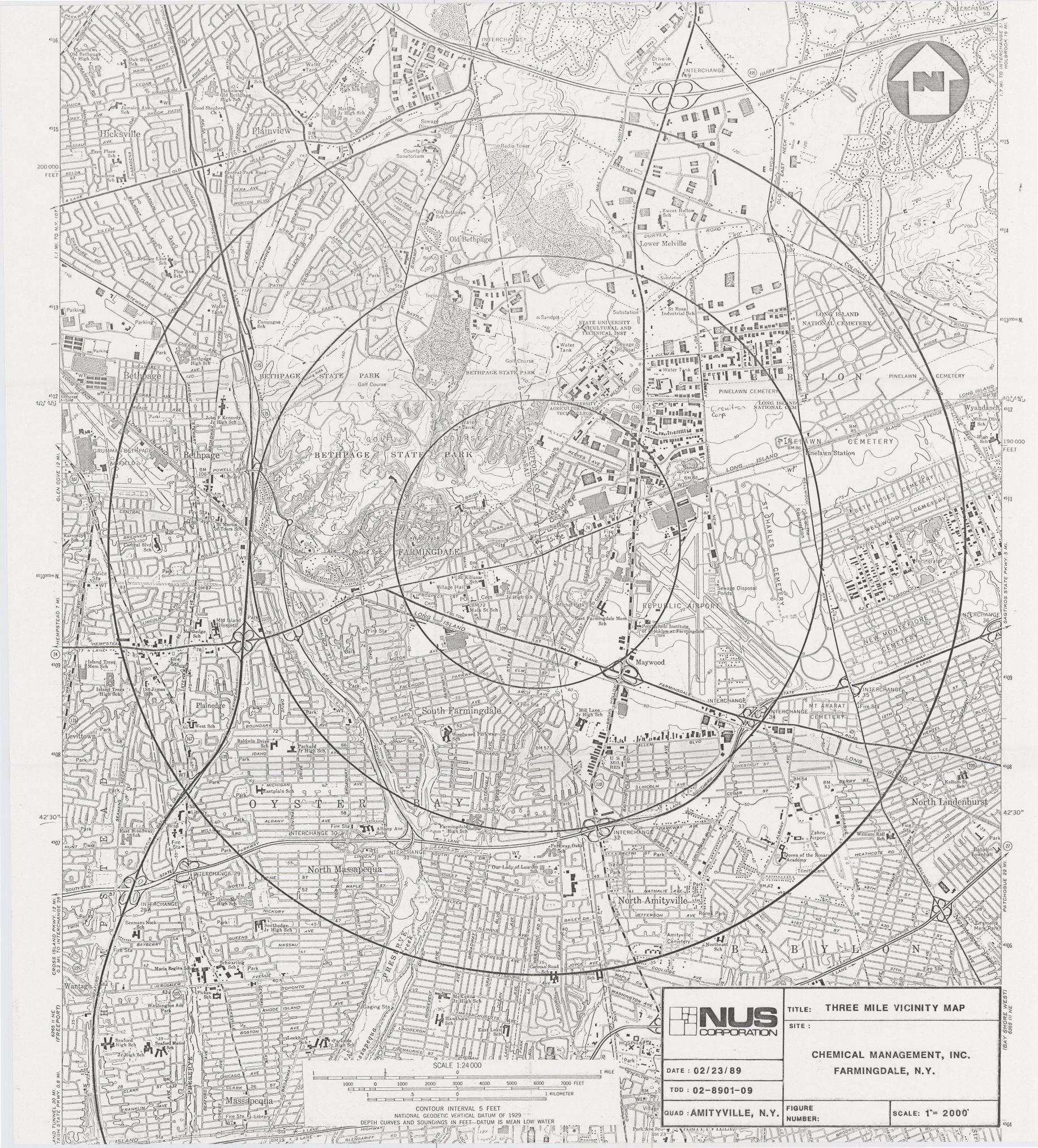
Chlorination(E)

UNILS(S)

Address	Village	Locel Non			Strate	Capacity (GPM)
N/S Eastern Swv	Farminodale	1-3	7852	450	M	1200
N/S Ridge Rd	Farminodale	2-1	1937	145	М	800
	Farmingdale	2-2	664 <u>4</u>	222	M	1400

SIDRAGE TANKS(2)

Address	Village	(MG)	Type
Ridge Rd	Farmingdale	். 4	Ground
N/S Eastern Pwy	Farminodale	0.5	Elevated



GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

VOLUME 2. MODELING

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 3-2
Contract No. 68023970
Project Officer: Russell Kinerson
Task Manager: Loren Hall

Prepared by:

GENERAL SCIENCES CORPORATION 8401 Corporate Drive Landover, Maryland 20785

Submitted: December 1, 1986

CHEMICHAL MANAGEMENT

LATITUPE 40:43:20 LONGITUDE 73:26:23 19	30 POPULATIO	N
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KM	0.00400	.400810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
s 1	1076	5606	11822	40191	65744	113063	237502
RING		5606	11822	40191	65744	113063	237502

GEMS> I

CHEMICHAL MANAGEMENT

LATITUDE	40:43:20	LONGITUDE	73:26:23	1980 HOUSING

KM	0.00400	.400810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
s i	331	1811	3568	11521	18812	33772	69815
RING		1811	3568	11521	18812	33772	69815

Mile	1 Total	mile	Total
rad.us	Population	radius	Houses
1/4	1076	1/4	331
12	6682	1/2	2142
İ	18504	,	5710
2	58695		17231
3	1 24439	2	1
		3	36043
L į	237502	4	69815

Farmingdale		Date May 19, 1987					
Fire at Chemical Management, Inc.,			Program Bureau of Land Resources Management Prepared				
1 2 3							
Update					JS → File		
•					MHM		
Initial Rejert	Dr. Dowling	 			VI		
epartment of Health	F.V. Pagar				IMPORTANT 1		
essau County	C. Juczak	19:243		!	- Unionit		
EPORT OF PECIAL SINGATING	· i ate To	Init.	Route To		IMPORTANT VI		

Describe event; significance; action taken and planned; and recommended action by others.

On May 18, 1987 this Department received a report of a fire at Chemical Management, Inc., in Farmingdale, a DEC permitted treatment, storage and disposal facility for hazardous wastes. Inspection by this Department on May 18, 1987 revealed the fire to have occurred in a compressor motor located on the second floor of the building where no chemicals are stored.

Firefighting water drained to the first floor where it was contained for proper disposal. No chemicals or wastes stored on the first floor were affected by the firefighting water or the fire. An inspection is scheduled for May 19, 1987 to monitor the cleanup.

cc: Administrative Staff - DEH Ken Cynar - Press Secretary

Copy (Copy to Date it intermation.

15-10, 21, -

New York State Department of Environmental Conservation Division of Solid and Hazardous Waste 50 Wolf Road, Albany, New York 12233

NEW YORK STATE
INDUSTRIAL HAZARDOUS WASTE MANAGEMENT ACT
(Chapter 639, Laws of 1978)

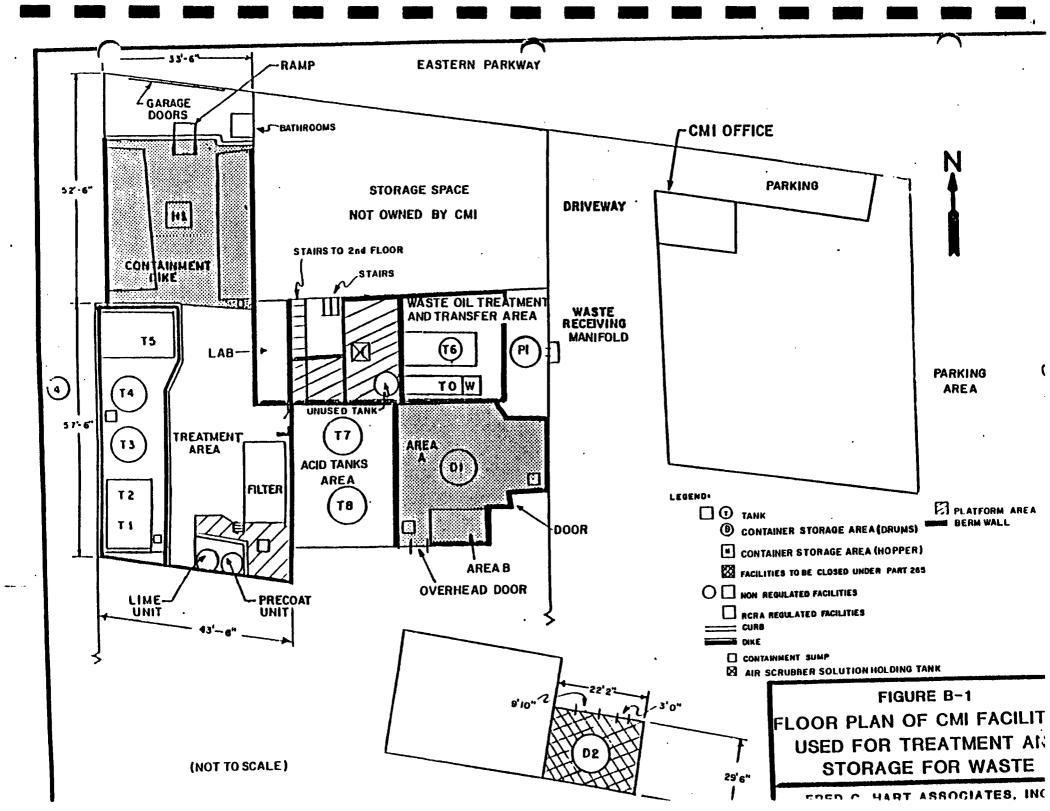
Inspection Form

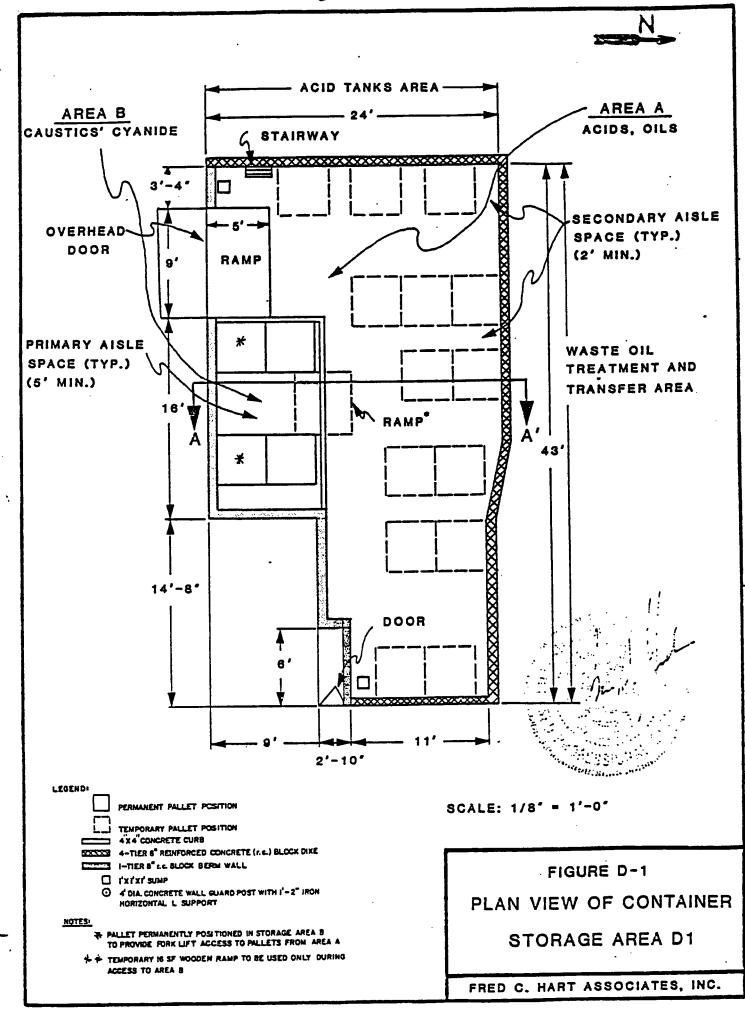


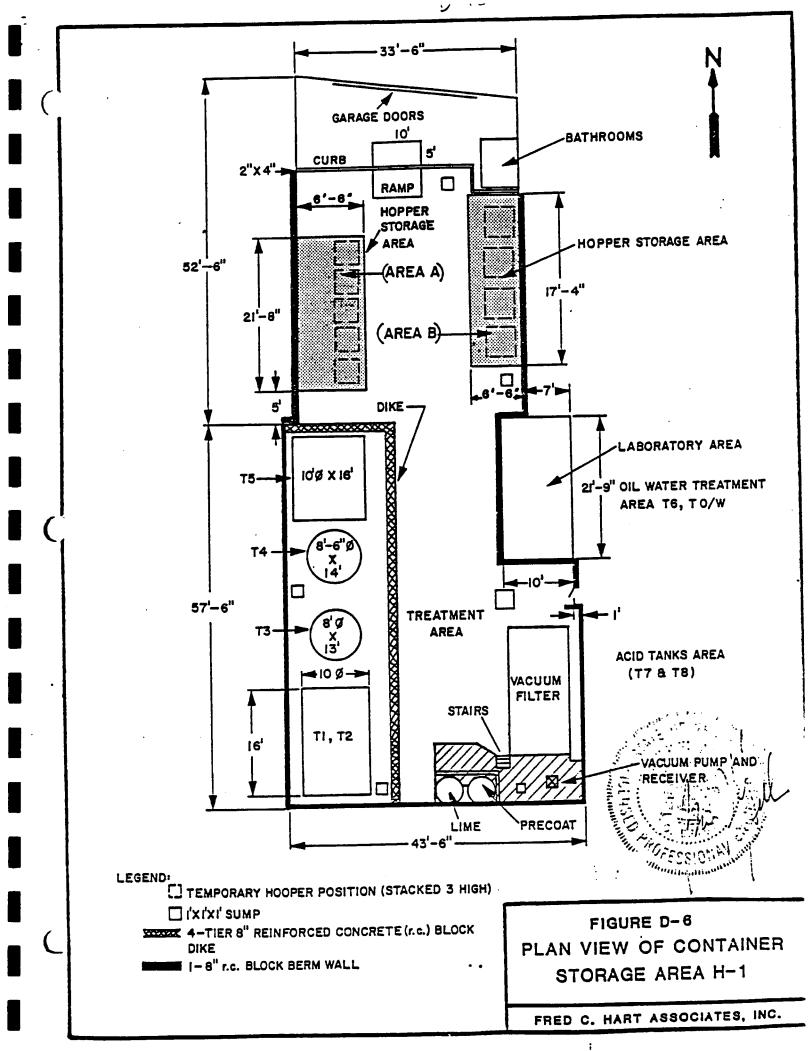
TYPE A Inspection Form - for handlers that are generators, transporters and/or short-term accumulators.

TYPE B Inspection Form - for handlers that are generators, and/or transporters that are also treatment, storage or disposal facilities.

THIS IS A TYPE B FORM







New York State Department of Environmental Conservation Building 40—SUNY, Stony Brook, New York 11794

(516) 751-7900



Thomas C. Jorling Commissioner

December 20, 1988

Ms. Diane Trube NUS Corp. 1090 King Georges Post Road Suite 1103 Edison, New Jersey 08837

Re: Farmingdale - Lindenhurst Sites

Dear Ms. Trube:

I have reviewed your request of 11/22/88, and have the following responses to your questions:

- 1. No "critical habitats" for federally listed endangered species have been designated for Long Island as of this date.
- 2. Please contact Mr. Philip Barbato, of our Water Unit, at 516-751-7900, ext. 226.
- 3. Please contact Mr. Charles Guthrie of our Freshwater Fisheries Unit at 516-751-7900, ext 263.

If I can be of further assistance, please do not hesitate to contact me at 751-7900, ext. 248.

Sincerely,

Michael S. Scheibel

Senior Wildlife Biologist

MSS/sjmr